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The·Northwestern·Miller

MILLING PRODUCTION SECTION

IN TWO SECTIONS—SECTION TWO

AUGUST 8, 1945

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Mr. Hayden, president of Hayden Flour Mills, Inc., Tecumseh, Mich., standing in the "Miller's Field" adjacent to the restoration of the Macon Flour Mill, a project undertaken by Henry Ford.

Perry Hayden's Dynamic Kernels

FIVE years ago Perry Hayden, president of the Hayden Flour Mills, Inc., Tecumseh, Mich., was inspired by a sermon preached by a young student pastor in the Friends church there. The young minister exhorted his audience to follow the Biblical injunction found in John 12:24 and prove the principle of Malachi 3:10, to grow wheat and to tithe it. This, the minister said, should be repeated for six years as directed in Leviticus 23:3, 4.

Mr. Hayden followed the Biblical instructions, sowing one cubic inch of wheat (360 kernels) the first year, and each year tithed his Quaker church one tenth of the harvest.

On Tuesday, July 24, the final harvest in Mr. Hayden's Dynamic Kernels project was completed. But instead of the one bundle from a plot measuring 32 square feet of ground, 4,868 bus of wheat was harvested from 230 acres by 40 combines supplied by Henry Ford. The wheat was of the Baldrock variety, a soft winter type, and averaged 21.2 bus per acre.

One tenth of the harvest will be sold and the proceeds given to the Tecumseh hospital. The remaining nine tenths will be sold to 4-H club members of Lenawee County, Mich., and in turn tithed to their own churches in 1946.

The harvest was scheduled to be held on Saturday, July 21, but the wheat was not ready to cut. A small plot of wheat in the church yard was sickled on that day, however, for the benefit of a large crowd assembled for the ceremony. Services in the church preceded the ceremonies, which were broadcast by a Detroit radio station.

Henry Ford has given much encouragement to the Dynamic Kernels project and has also taken an active part in it. The project will not be continued into the seventh year, in keeping with the Biblical sabbath year.

Volume 223 • Number 6

A great staple in the American diet

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Better!

A great improvement in a great staple

ONE of the greatest single contributions to national nutrition is the universal improvement in our diet provided by enrichment.

Throughout the enrichment program, the milling industry has expected, and we believe has received, the utmost in co-operation and service from the Merck organization—as well as the best possible in vitamin mixtures.

To meet the miller's requirements for flour-enrichment mixtures that are smooth and free-flowing—providing important operating advantages in continuous feeding or batch-mixing and facilitating *accurate* enrichment—Merck offers the trio shown below.

The milling industry can always depend on receiving *outstanding* mixtures from the *outstanding* leader in the synthesis, development, and large-scale production of vitamins.

MERCK Enrichment Mixtures are BETTER Mixtures

Merck also offers
NO. 36P—VITAMIN MIXTURE
This is identical in composition with No. 36 Vitamin Mixture, except that in place of Iron by Hydrogen, Sodium Iron Pyrophosphate is used.
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The Land of Antiquity

Egyptian Harvest Methods Unchanged

By C. C. Isely

EDITOR'S NOTE.—The following is another contribution from Mr. Isely, who is well known to the readers of this journal. He recently completed a tour of the Mediterranean and Near Eastern areas as a war correspondent accredited to various publications including this journal. Mr. Isely, in private life, is a merchant and farmer. His home is at Dodge City, Kansas.

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AN ancient milling center, 3,000-year-old harvesting practices, an old mill equipment manufacturing community, were all possibilities on the day's scheduled route of a tour in Egypt.

You don't travel where you want to go in Palestine. You go on regular Army-Red Cross sponsored tours, you take one of the busses along regular routes with fares about one cent a mile, or you grab at a chance to ride with some military outfit going just where you might want to go.

We had ridden with a British transport to Amman, Trans-Jordan, and hoped to catch the trucks at Mafraq, on the edge of the desert, to Tiberias, but got stranded with a British regiment, really an East African negro regiment guarding the oil pipeline and officered by over-age English officers who had all seen combat duty in Europe. They were sending their black boys, Sunday, June 10, down 70 miles to Tiberias on Lake Galilee to get a swim and a bath. After inspection and parade we got off, riding a lorry with a companionable British sergeant.

Mafraq is in a typical short grass country, but soon we began to see fields of wheat and as we drew nearer to the Jordan these fields were larger and better, even 30- or 40-acre fields that should have made yields of 12 bus per acre. The high altitude was like our own high plains, the red soil like Oklahoma's. Harvest was in full swing, with men, women and children at work. The harvesting tool was just like that used by Abraham and Jacob 3,500 years ago, a hand sickle. As we began the sharp descent to the Jordan, it was apparent that the thin stands on the rocky terraces could not have yielded more than 4 or 5 bus per acre.

In Egypt it rarely rains after May 1. There is no need to hurry, the wheat won't lodge or the stacks get wet. The wheat is bunched to make the equivalent of 10 or 12 sheaves. These are gathered into some sort of a rack made of a set of sticks tied together with ropes. The wheat is bundled into this contraption, making a sort of mat seven feet long. One end is lifted, a donkey is pushed underneath and the mat is dropped on his back. The poor mule is practically buried. Only the tip of his nose is visible. He is carrying the harvest to the threshing floor. Many times a similar load is borne by camels, maybe two camels tethered tandem, led by a man in front. How this much larger stack is hoisted onto the much taller camel we did not have opportunity to observe. The camels, too, went swaying down the road, and, like the donkeys, were reluctant to make room for the tooting trucks to pass. Sometimes one saw a woman carrying a bundle of wheat down to the threshing floor.

Threshing Grain in Palestine—a Technique Unchanged Since the Time of Christ

Any level place is used as a threshing floor. The straw is heaped up six or eight feet high in the middle and thence dragged into a circle around the edge on which usually a pair of cows or oxen driven by a boy dragging a sort of sled, tramp 'round and 'round. The crisp straw shatters and breaks readily into small bits. Then the winnowing begins, tossing the chaff into the breeze. It requires some wind to blow the chaff away. After being tossed and tossed over and over again, fairly clean wheat appears on a pile and after another operation is gathered into bags. It is almost unbelievable how much labor is entailed to grow and thresh one bushel of wheat. Harvest like this is the same in Palestine and Egypt except on the communal Jewish farms where modern machinery is used.

We saw some fields where harvest was already finished and the soil had been stirred by the rude wooden plows for next autumn's seeding. Black tents of Bedouins also were in evidence with their unsheared sheep and flocks of black goats. One place we saw same 50 camels grazing not far from the road.

The twisting road dropped down to the Jordan Valley. We passed the dams on the Yarmuk and the outlet of Lake Galilee and the power plant that electrifies all Palestine. Skirting the lake we came to Tiberias at about 1 o'clock.

Tiberias was first built by Herod Antipas and is now quite a flourishing city. Having missed the boat, we finally hired a driver to take us around the north end of the lake in a total drive of 30 miles for $10.

We were seeking one of the traditional sites of Capernaum, and came to Tel Hum where Franciscan monks have acquired the site of an old synagogue. Capernaum was where Jesus spent the most active period of his teaching.

Of interest to readers of this journal was the accumulated wreckage of some 20 pairs of millstones. These are not small hand-operated affairs. The lower stone is cone shaped, about 18 inches in diameter at the base of the cone. The upper stone is concave, the obverse part of the mill made to fit perfectly over the lower one. When in place, on its top end is another concave receptacle which would hold maybe three pecks of wheat which would percolate down as the upper stone was turned and be ground into fine whole wheat flour. A protuberance on each side of the upper stone was made for wooden sweeps to be inserted so that the stone could be turned by oxen, or probably, four men. The lower stone was probably set on a stone floor for the flour would sift down all around. Three of us, with an effort, lifted an average upper stone and guessed it would weigh 500 lbs. These stones of various sizes are said to have been excavated on the site, are strewn around helter-skelter and do give the impression that here was an ancient milling center.

Set off by itself was another much larger pair of stones of a different type. The upper one was a huge wheel, 24 inches thick, tapered to circle about the lower stone, and easily roll 'round and 'round. The lower stone is slightly chiseled out to make an obtuse V-angle of about 150°. The upper is made to fit into this lower V. This outfit may have belonged to the biggest miller, the General Mills or Pillsbury or what have you, in old Capernaum.

The basalt, rather fine, black lava froth, is particularly suitable for these mill stones, having the abrasive surface desired, and the more they were used the better the top one would fit the lower one and yet they would always remain sharp. There are no seams as in limestone and the stone is not too hard to cut and trim. In this neighborhood there is abundance of this volcanic rock so it may be possible that instead of a commercial milling center, the Allis-Chalmers or the Nordyke & Marmons of that day manufactured mill-

(Continued on page 26a.)

In a Wheat Field of Modern Palestine

A Threshing Floor in Modern Palestine

Celebrating Its 75th Anniversary

Fulton Bag and Cotton Mills

A Pioneer Atlanta Industry

By R. T. Beatty

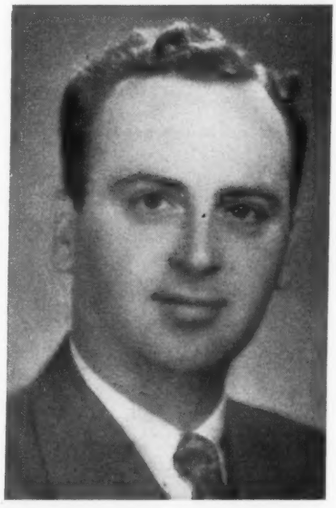
THE Fulton Bag and Cotton Mills is this year observing its 75th anniversary. It was founded in 1870, in Atlanta, Ga., by Jacob Elsas, who had located in that city after the Civil War. In the interim, he had been engaged in the manufacture and distribution of bags, drawing on eastern markets for his textiles. He incorporated under the name of Elsas, May & Co., and began the manufacture of cotton and paper bags. The company was successful from its inception and, in 1881, built its original cotton mill. The name was changed to the Fulton Cotton Spinning Co. and, in 1889, reincorporated under the present style, Fulton Bag and Cotton Mills.

Mr. Elsas was a man of broad vision, and an outstanding figure in the business world of the South during an era of great industrial expansion. He died in 1932, but lived to see his dreams come true. From a humble beginning, he built and operated bag manufacturing plants at half a dozen strategic points throughout the country, serving flour mills, agriculture, and other industries requiring paper, cotton and burlap bags. The parent plant in Atlanta became the largest single industry in that city, embracing cotton mill, bleachery, twine mill, printing establishment and canvas factory, together with all their related auxiliaries, power plant, laboratories, etc.

Six sons of Mr. Elsas joined their father in the business, after graduating from college, but three of them preceded him in death. All were grounded in the principle that industry was created to serve man, and not that man should serve industry. Employees were encouraged to become partners in the business, on the principle that where their investments were, there their hearts and chief interest would be also.

It was late in the nineties that the company began branching out. The demand for its products had become national in scope, and the necessity for branch manufacturing plants close to large consuming areas was recognized. So the Delta Bag Co. plant in New Orleans was purchased in 1897, and, the following year, the factory of the Keokuk Bag Co. was acquired, and moved to St. Louis.

Benjamin Elsas, a son of the founder of the Fulton Bag and Cotton Mills, is chairman of the board of directors.



Clarence E. Elsas, first vice president of the Fulton Bag and Cotton Mills, is a grandson of the founder of the company.

At the turn of the century, the necessity for better distribution in the East led to the establishment of a plant in New York City, which was moved to Brooklyn in 1916. The growth and development of Texas and the Southwest led to the building of the first bag factory in Texas, in 1906. This was located in Dallas.

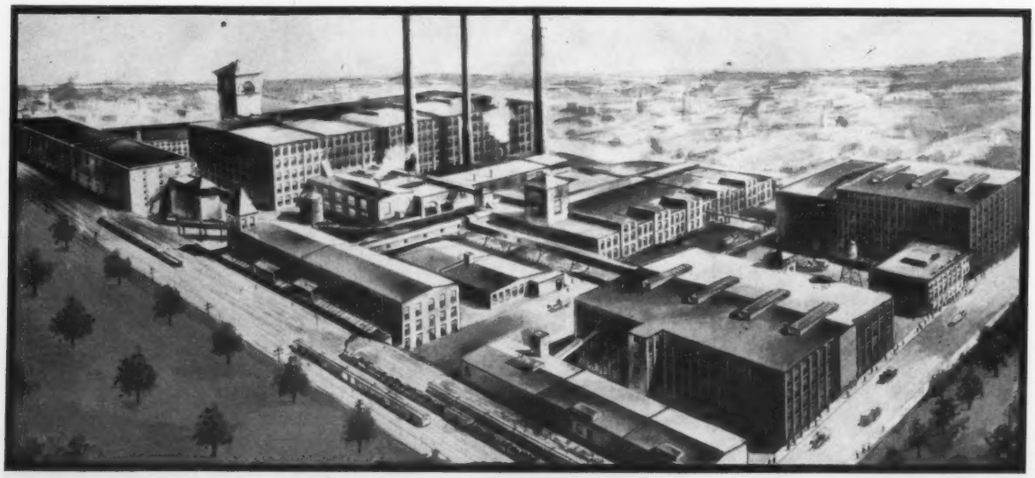
During all this period, the company's manufacturing facilities in Atlanta were increased many times over. This applies both to the spinning and weaving of textiles, as well as the finishing, bleaching and waterproofing of materials.

During World War I, the company's facilities were taxed to the utmost, so in the early 20's another plant was built at Minneapolis. This factory is managed by August Denk, whose father was one of Jacob Elsas' earliest associates in the company. There are several other instances of this kind, where not only in the Elsas family and the Denk family, but in other families, the sons and grandsons of old employees joined the organization.

In 1927, the increased demands of the milling and grain trades in Kansas, and contiguous territory, led to the establishment of a factory in Kansas City, Kansas, and this year, the 75th anniversary of the company, brought still another addition to the Fulton ranks. The plant of the Grimes Bag Co., at Denver, was purchased, to serve users of bags in the Rocky Mountain territory.

During the past 75 years many changes have taken place in the types of containers used for various products, not only for items such as flour, sugar and feeds, but for agricultural products like potatoes, onions, citrus fruits, fertilizers, and other chemicals. All these essential products are packed in bags. The Fulton Bag and Cotton Mills has progressively enlarged its range of products to keep abreast of changes in demands.

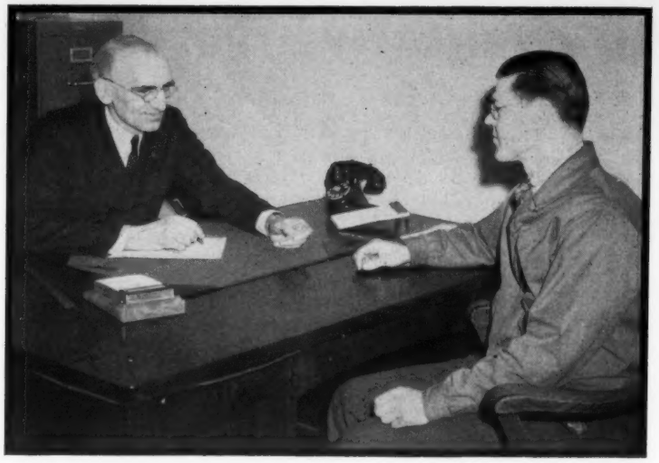
The company can view with satisfaction its growth and development, and look forward with confidence to the future. It is still under the management of the Elsas family. Benjamin Elsas, a son of the founder, is chairman of the board, and Norman Elsas, a grandson, is president. Other members of the family are among the principal executives. W. R. Elsas and Clarence E., grandsons of the founder, are vice presidents at the Atlanta headquarters. E. A. Cronheim is secretary and treasurer.



Shown above is an aerial view of the huge plant of the Fulton Bag and Cotton Mills at Atlanta, Ga. At one time the Fulton plant was the largest single plant in the city. The plant includes cotton mills, canvas mills, printing plant, tent factory, etc., as well as textile bag plants.

Norman E. Elsas, president of the Fulton Bag and Cotton Mills, is a grandson of the founder of the company.

LEGAL OBLIGATIONS to Your Company's SERVICE VETERANS



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The flour milling industry now is faced with the task of rehiring the men who left their mill jobs for the armed services. Every employer has a responsibility in this respect and should be familiar with his legal duties and rights. This is the first of two articles dealing with the subject, which are extracts from a booklet entitled "Rehiring Your Company's Veterans" which was prepared by the Research Institute of America. The Institute is a unique organization which functions as liaison between government and industry, rendering advice and counsel to its more than 30,000 members among professional and business firms and government agencies and bureaus. The Institute's authoritative reports on current legislative and economic trends, from which this article was adapted, clarify government regulations and restrictive measures for the business man and his professional advisors. Recommendations show how industrial policies may be adjusted to changing regulatory and business conditions and economic trends.

★ ★

EMPLOYERS are charged with the legal duty of restoring to a former job or to a job of like seniority, status and pay any individual who:

1.—Has been discharged under honorable conditions from the army, navy, marine corps, coast guard, army nurse corps, merchant marine, WACs, WAVEs or SPARs (but not the coast guard auxiliary).

2.—Applies for such reinstatement within 90 days of being mustered out, or within 90 days of the end of hospitalization, if continuing for less than one year after discharge.

3.—Is still able to perform previous or comparable duties.

4.—Was a permanent, not a temporary employee, unless the employer's circumstances have so changed as to make such re-employment "impossible or unreasonable."

If an employer refuses to rehire a veteran who qualifies for re-employment under the law, the local draft board will attempt persuasion. If the employer still persists in his refusal, a suit will be brought by the U. S. district attorney on behalf of the veteran in the federal court in the district where the employer maintains his place of business. Such cases are given preference on the calendar.

The court may order the veteran's reinstatement with back pay and any other benefits he has lost because of the delay. The back pay will accumulate from the date the veteran should have been rehired to the date when he is actually taken back. If the employer refuses to comply with the court order, he is guilty of contempt and becomes subject to a penalty of fine or imprisonment.

Sec. II of the Selective Service Act says that any person who knowingly fails or neglects to perform any duties required by the act may be imprisoned up to five years and fined as much as $1,000. It is not likely that these penalties will be applied except in cases of willful and repeated refusals to re-employ. Much more likely is use of the court's power to punish a recalcitrant employer for contempt.

The Laws That Control

The basic laws which govern the rehiring of veterans, whether men or women, are the Selective Training and Service Act of 1940, the Army Reserve and Retired Personnel Service Law of 1940, the Service Extension Act of 1941, the Merchant Marine Re-employment Upon Termination of Wartime Service Act of 1943, the Women's Army Corps Act of July, 1943, and the G.I. Bill of Rights of 1944.

The regulations of the various government agencies controlling manpower are framed with a view to encouraging the re-employment of returning service men by old and new employers alike. Thus, the War Manpower Commission has relieved veterans of the necessity of presenting statements of availability or referrals from the United States Employment Service on applying for jobs. (Note, however, that veterans who were released from the armed forces because they were needed in essential industry, may not leave such employment without clearance.)

Veterans may be hired without regard to WMC employment ceilings. If the number of your employees has already reached your ceiling, you may continue to take on veterans. However, in the setting of a new ceiling, the War Manpower Commission may count veterans who are already employed.

The War Labor Board has also liberalized its regulations with reference to the rehiring of veterans. Thus, your returning veterans need not be counted in determining the 25% ceiling on the number of new employees who may be hired at rates above the minimum of the employer's rate range.

What Does "Employment" Mean?

The Selective Service Act declares that the right to a former job is held by any veteran who left a position in "the employ of any employer." Selective Service has not set forth any precise criteria, but it is safe to assume that a veteran will be considered a former "employee" of your company if he rendered regular and continuing service in any capacity other than that of an independent contractor.

In a recent decision on this point the Third Circuit Court of Appeals found: "the status which the statute protects is a 'position' . . . in the employ of an employer, an expression evidently chosen with care." The court further pointed out that while this expression "is roughly synonymous with 'employee,' it unmistakably includes employees in superior positions, and those whose service involves special skill, as well as ordinary laborers and mechanics." The court concluded that although the words are not applicable to an independent contractor, they do embrace virtually every other employer-employee relationship, except casual or temporary workers who are expressly counted out in the act.

Leaving a Position

Even an employee who quit his job to take a vacation before being inducted is generally to be granted his full re-employment rights. The same principle holds true for an employee who left his job with the intention of enlisting or getting a commission. If you have any doubt about a particular employee, apply this test: Was some form of military service anticipated when the veteran left your company? If so, he is entitled to complete reinstatement. But note that in any of these situations if the employee was not inducted he has no re-employment rights.

One of the most frequent rehiring questions asked by business men is whether they have to re-employ all of several people who successively went into the armed forces from the same job. Under Selective Service rules the answer is plain. You need rehire only the first holder of the job. The others are to be regarded merely as having kept the job warm for the original incumbent.

There is one important exception to this general rule: Suppose that X, a permanent employee, is drafted and Y, another permanent employee, is upgraded or transferred into X's place, only to follow X into service. If both X and Y return they are equally entitled to reinstatement in their original permanent positions. Y is not considered "temporary" merely because he was transferred into X's job. He would be considered temporary if he had been brought in from outside.

It is the actual relationship between the company and the employee, not the particular job the latter may have had at the time he went into service, that determines his right to re-employment.

Note, however, that if a temporary worker should be upgraded or transferred after his hiring to a "new or original position"—one not arising from the induction of a permanent employee — the "temporary" worker may become "permanent" depending on the facts in the case.

Temporary Employees

The Selective Service Act declares that a veteran is to be reinstated in his former job or its equivalent "if such position was not a temporary position." It is generally understood that a person hired for the specific purpose of pinch-hitting for an employee who donned a uniform is a "temporary" employee within the meaning of the law. It is not so widely known, however, that another class of employees may be considered "temporary." This second class is made up of people hired for jobs created solely for war purposes—jobs that will end when the war ends. In general, employers are not legally compelled to rehire employees who left such temporary jobs to go to war.

Although there have not yet been definite rulings on the question, there are two situations in which employees in "temporary" jobs may be entitled to re-employment:

1.—Where the "temporary" war job is still in existence at the time the veteran comes back looking for work. (In this case, of course, his right to employment would end when the job ends.)

2.—Where the company is contin-

(Continued on page 20a.)

A Qualitative Test for Bran Specks

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Simple Chemical Reaction an Aid to Determining Flour Grade, Regardless of Ash Content

IT is often necessary in the laboratory to run quick qualitative tests on commercial flours for detecting possible admixtures or impurities. Only the following impurities and added ingredients will be considered in this discussion:

First to be considered will be the contamination of flour with bran particles. Second, the presence of added novadel in the case where total decomposition of benzoyl peroxide has not yet taken place. Third, mention will be made of common salt or possible other chlorides. Fourth, the admixture with phosphates or both salt and phosphates.

All these different tests are made on a slicked flour by pouring the appropriate chemical solution over its surface, which causes typically colored spots to occur in places where particles of bran or of added ingredients are located.

Determining Flour Grades

Due to the fact that the branny particles in flour are deeply stained by benzidine, this reagent dissolved in alcohol offers a very useful means of visualizing the relative amount of bran particles in flour. This color reaction is of an enzymatic origin and the finest branny substances distributed in the flour will show up distinctly. For this reason this test may be of some use in the distinguishing of flour grades, independent of the ash content.

Some actual experience with this test will not fail to make this clear. The reagent is a 1% alcoholic benzidine solution. No denatured alcohol should be used. The flour slick is dipped in water, withdrawn and left for about a minute before the reagent is poured over it, just enough to cover its entire surface. The slick is then left to dry at ordinary temperature and can be watched from time to time. Gradually the surface will darken, the lower flour grades much more and faster than the better grades. The branny specks containing a high concentration of the enzyme turn almost black. It will be noticed that differences in flour grades are much more pronounced with this test than with the ordinary Pekar test.

The second spot test here developed is for the purpose of demonstrating the presence of benzoyl peroxide in flours that have been treated with novadel and is conducted in the following manner:

A hot mixture of 1 cc of 30% potassium iodide solution, 5 cc of pure grain alcohol and 2 cc of glacial acetic acid is poured over a dry Pekar flour slick. The low surface tension of this mixture makes an even distribution quite easy. If the flour contains benzoyl peroxide particles, they will be indicated by small brown or yellow specks, caused by the liberated iodine from the KI solution.

It was found that the presence of novadel can be demonstrated from two to three weeks after the novadel treatment of the flour. This is because some of the larger particles of benzoyl peroxide may take more time to decompose. On freshly treated flours it is possible to estimate to a certain extent the degree of treatment when the sample is compared with other samples which have been treated at the laboratory with definite amounts of novadel.

Testing for Salt

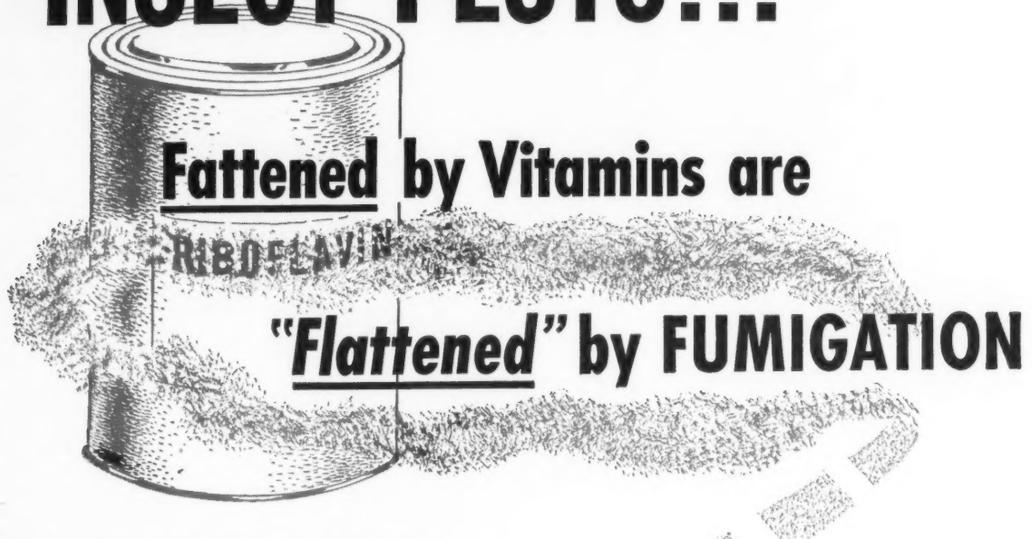
The presence of chlorides in flour (mostly sodium chloride or common salt) can be easily demonstrated by treating the wet slick with a solution of silver nitrate, acidified with nitric acid. When the slick thus treated is exposed to the light, purple specks will appear, indicating the presence of silver chloride, formed by the interaction of silver nitrate and sodium chloride. Each spot therefore indicates the presence of a salt particle.

Phosphated flours can be identified in a similar way, but in this case the silver nitrate solution should not be acidified with nitric acid. The acidification in the case of testing for chlorides is necessary only for the distinction with phosphate treatment.

It is, however, very well possible to distinguish between the phosphates and the chlorides, in case both are present in the same flour sample and

(Continued on page 18a.)

INSECT PESTS...



Fattened by Vitamins are

"Flattened" by FUMIGATION

"Pepped up" by today's vitamin enriched foodstuffs, flour beetles and other pests are making themselves more of a problem than ever. As one report put it recently, "...the flour beetle produces many more progeny in enriched flour than in nonenriched flour."

There's only one way to handle the problem, and that's by *fumigation.* Fumigation with Liquid HCN gives you maximum kill at minimum cost... makes your product even more satisfactory to inspectors and customers. For Liquid HCN kills *all* stages of insect life, from egg to adult. It is harmless to foodstuffs and equipment... is safe, quick and convenient to use... is adaptable to all sizes of mills, warehouses, and food processing plants.

Adopt a preventive plan *now!* Assure yourself of a positive, efficient fumigation job by consulting an Industrial Fumigation Engineer. He will be glad to go over your pest control problem with you... and, if you wish, handle it for you. If you don't happen to know the Industrial Fumigation Engineer in your territory, we'll gladly send you his name. You incur no obligation.

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SPECIFY THE FUMIGANT PREFERRED BY EXPERTS

LIQUID HCN

A British View of Technical Education

THE question of technical education for operative millers in the postwar period is receiving widespread attention by government departments in Great Britain, according to an article in a recent issue of Milling, British business journal for the milling industry.

"We are tackling the matter speedily and energetically in order that future generations might be attracted to seek employment in the flour milling industry," the article stated.

W. G. Hyde, president of the Flour Milling Employers' Federation, in his report made at the annual meeting of the executive board of that organization, presented a review of the progress in technical education courses for operative millers, and discussed possible changes in the program. Following are excerpts from Mr. Hyde's report:

"Toward the end of 1943, a conference was held when representatives of the National Joint Industrial Council met with representatives of the Ministry of Labor and the Board of Education to consider replies submitted by the technical education committee of the N.J.I.C. to a questionnaire issued by the Ministry of Labor on the recruitment and training of young men for the industry.

"A large number of youths will still be required by the armed forces for the continuation of the struggle against Japan and for the armies of occupation, and the government seems determined that, as far as possible, the limited number of young men who will be available to industry shall be encouraged to enter industries that will train them to become skilled and efficient employees who will be of good service to the nation during the critical period ahead.

"Some surprise was expressed at the conference that the normal age of entry into the flour milling industry is 18, and already there is a strong feeling in the trade itself that youths should, in future, be recruited at school leaving age, as a continuation of the present practice will mean that the best types of boys will be absorbed into other occupations. Attention was also drawn to the small differential which exists between the wages of a general laborer and those of the highest skilled operative, a differential which many people assert does not offer sufficient inducement to attract the right type of youth.

"Moreover, the present system of technical education in the industry has been under fire for some years, the chief criticism of the syllabus being that it neither produces efficient craftsmen nor highly skilled technicians.

"Many people in the trade are confident we shall never produce really good craftsmen unless a system of apprenticeship is introduced in the industry, as one point upon which everyone appears to be in agreement is that the only place to train a miller is in the mill, although this practical training must naturally be coupled with theoretical instruction at classes.

"Technical education is a very contentious subject; everybody is convinced that something should be done to improve our educational standards but opinions differ as to the best methods of achieving this object. A number of people think we should confine our efforts to the training of the ordinary milling operatives as at present, and they think the existing educational system in the industry is quite sufficient for this purpose, provided it is not too rigid and can be altered and extended, within reason, to suit changing conditions.

"On the other hand, there are others who maintain that we should, besides providing a more practical training for operatives, make ourselves responsible for the provision of advanced technical training for those who seek the higher managerial positions in the industry, and for this purpose the establishment of a School of Milling has been advocated in many quarters.

"Whatever we may decide to do, the important thing to remember is that if our methods are to be successful, all sections of the trade must be with us, and for that reason it is essential that all the various suggestions made should be fully and widely discussed before being adopted. The national association, for example, is intimately concerned in the question of higher education for potential mill managers and a few months ago a joint meeting of the executive committees of the federation and the national association was held to consider the whole question of postwar technical education in the industry.

"The meeting was most successful and a long and friendly discussion took place, as a result of which the federation was requested to prepare alternative educational schemes, with estimates of costs and numbers of students involved, so that these might receive consideration at a fur-

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ther meeting of the two bodies in order that some practical steps might be taken to give effect to what is hoped will be the joint views of the two bodies responsible for the flour milling industry.

"The preparation of these schemes is no easy matter, as a considerable amount of investigation in regard to conditions in our own and other industries is necessary, and masses of detail have to be collected and sorted. In spite of this, and the heavy calls made upon his time by other activities, Mr. Twomey has willingly undertaken the task and our thanks and support are due to him. Without hesitation, I say we are indeed fortunate in having had Mr. Twomey with us for such a long time. I am sure the interests of both the industry and the federation are closest to his heart and he is always tireless in his efforts to serve our cause. A small committee has recently been formed, composed of two representatives of the national association and two of the federation, to assist Mr. Twomey in formulating a scheme which he can put before the industry.

"I have given a brief review of the long term educational position, but a more immediate problem which will soon be confronting us is the question of refresher training for men returning from the forces. In many cases, these men have been serving their country since the start of the war and their knowledge of flour milling will be very rusty on their return to civilian employment. This matter has not been overlooked and plans to meet the situation are well under way."

——BREAD IS THE STAFF OF LIFE——

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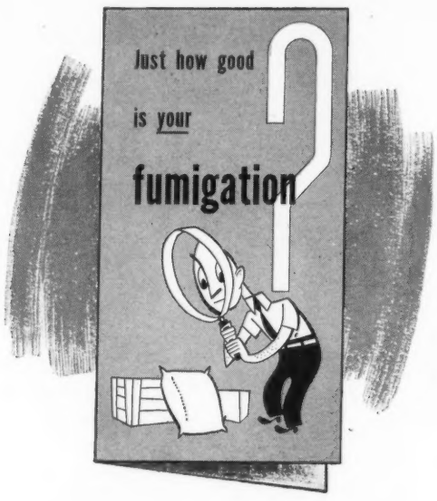

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Personnel Management

By C. E. Danielson

Wall-Rogalsky Milling Co.
McPherson, Kansas

THESE past few years we have really found out the meaning of co-operation. Without co-operation we can accomplish very little. When we do receive co-operation we should be quick to acknowledge it.

There is a story told about Richard Wagner, the great musician. He was once giving a concert on the pipe organ. He turned to the audience before taking his place on the organ bench: "I will now play a selection from my opera, 'The Flying Dutchman.'" The audience applauded. Wagner took his seat at the organ, but before he could begin to play, a red-haired boy bobbed up from behind a little screen, where he was pumping the wind into the organ. "You have forgotten something, Herr Doctor Wagner," said the boy. "You mean we will play." Wagner saw the point and was big enough to acknowledge it.

The organ pumper and the great musician were necessary to each other. No matter how fiercely he pounded the keys, no sound would come forth to delight his audience unless the boy was at his post. How easy it is to forget the "other fellow's" part in what we are trying to accomplish.

In all the work in a mill, men must work together. The man who sells the products, the man who raises the money so that selling and producing will amount to something, the miller, the chemist, the packers, the oiler, the sweeper, the millwright, the trucker and the elevator men, yes, and the engineer, the traffic manager, the bookkeeper, the grain buyer, the manager, and the stenographer—all of these are necessary to the success of milling.

The "We" way is better than the "I" way. Most of our troubles are made by the people who don't know any other way of looking at things than through an "I." To get the best product, whether in office, or mill, or factory, or home, we must have teamwork. The person who thinks "we," talks "we" and acts "we" has learned the secret of teamwork, and teamwork brings home the bacon.

It isn't the individual or the army as a whole, but it's the everlasting teamwork of every blooming soul, and today we find this to be more true than ever. So, it behooves us to "strive to please" more now than ever before; it might eliminate some of our labor troubles.

We should take time during working hours to visit the men, to chat with them and to ask them how they are getting along. If they are doing a good job, give them a little praise, and your honest appreciation. I have worked for superintendents who wouldn't or couldn't speak a kind word, but they did know how to find fault and criticize; others were quick to give praise and a word of encouragement.

If an employee makes a mistake, call attention to it indirectly. Talk

about your own mistakes before criticizing the other fellow.

Ask questions instead of giving direct orders. How much better to say to a man, "Say, Bill, will you help John with that spout?" or, "Hank, will you clean sacks as soon as you have some spare time?" or, "Jack, I will appreciate very much if you will keep that mixer full."

Let the other fellow save his face; never bawl him out in the presence of others. At a convenient time call him aside, explain and correct him. If he is the right sort of a man he will stand correction. And then we should always praise the slightest improvement and praise every improvement. We should be hearty in our approbation and lavish in our praise. Most men will react to kindness, and respond in doing the best they can.

We should give the right sort of a man a fine reputation to live up to; encourage him all we can, make the fault seem easy to correct, make the other fellow happy about doing the thing you suggest.

We should interest ourselves in each man; be his friend. Let him feel you are his friend, never betray his confidence he may place in you, and above all be easy to talk to. If you can do him a favor at any time, do so. Little deeds of kindness done in a quiet way reach both depth and wideness and always bring the pay. So let "strive to please" be the mainspring of all our endeavors.

I firmly believe that anyone employing men or who is a boss or superintendent has to live a life above reproach in the mill and out. I don't mean to imply that he should be a saint, but neither should he be a devil. He needs to be temperate at all times and in all things.

There is more to this job of being a superintendent than what meets the eye. Knowing how to grind wheat into good flour, making the lowest yield possible, getting the most flour out of a bushel of wheat, keeping the cost of manufacture down to the minimum per sack, keeping the mill clean, and making it a pleasant place to work is part of the job. He must also be a diplomat, a lawyer—yes, even a first-aid specialist. Also an advisor, a healer of ruffled tempers, a go-between, a good mixer, and, above all, a man easy to talk to. Yes, he must know how to laugh, how to joke, and even how to sympathize; he should know how to read character and even know how to keep his own counsel.

There are principally two types of men—one with superiority complex, the other, inferiority complex. Each has to be dealt with separately; so one has to know how not to give, advise, admonish, criticize, or even to praise, above the ability of the individual to absorb.

So again, let "strive to please" be the mainspring of all our endeavors.

v v

Editor's Note.—The foregoing article is the text of an address presented by Mr. Danielson at a meeting of District 1, Association of Operative Millers, in Wichita, Kansas, May 12, 1945.

——BREAD IS THE STAFF OF LIFE——

It is thought that the method described may prove useful as an aid in the selection of milling wheat high in content of the vitamins. It may also facilitate a study of the distribution of thiamine and riboflavin in wheat and aid in the development of milling processes which may produce flour rich in these particular vitamins.

For Your Health

Suggestions for Avoiding Heat Stroke

By Dr. W. Schweisenheimer

A WORKING man's chance of escaping sunstroke and heat exhaustion hinges greatly on what part of the country he lives in. In southern regions he is 28 times more likely to fall a victim to it than in northern parts of the country. Heat and sunstroke, on the average, do not take their greatest toll in the southern states, but in the east central and west north central states such as Minnesota, Michigan, Wisconsin, Illinois, Ohio and Missouri, so-called temperate states.

Men are three times more liable to heat stroke than are women, and, contrary to popular belief, Negroes are two to six times more susceptible than white persons. A colored worker in the flour and grain industries, therefore, may suffer from heat where

Kitchen, courtesy of Consolidated Edison Co.

WILL THE THOUSANDS of housewives who turned to commercially baked bread during the past few years go back to home baking as they give up their jobs in war plants?

The answer will hinge to a great degree upon whether the word "ENRICHED" is featured on your sacks and packages of family flour.

For during the period since January, 1943 when War Food Order No. 1 made enrichment of bakers' white bread and rolls mandatory, the public has learned to appreciate that the word "ENRICHED" means higher value, will in fact insist upon seeing it when buying either bread or flour after wartime regulations are rescinded.

For best insurance that housewives will resume home baking, and use more flour than in any recent decade, take the necessary steps now so that ALL your brands of family flour will feature that word "ENRICHED."

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a white worker gets along very well.

A recent study of a group of deaths of men, aged 15 to 64, from effects of heat, has shown that 40% were occupational in character. Working in a city is more dangerous than in rural districts during a heat spell. The worst period of the day is between 2 and 5 o'clock in the afternoon; second largest number of strokes occur between 7 and 10 o'clock at night. Working inside a house may be more harmful than outdoor work. Indoor temperature may continue high in spite of decreasing outside temperatures.

Profuse perspiration takes large amounts of salt from the body. Salt water will prove refreshing in a concentration of 0.1% (a level teaspoonful of salt to a quart of water, or a 15-grain salt tablet with a glass of water). This will replace the salt lost by perspiration. Many plants use dispensers located adjacent to the drinking fountain for salt tablets. Others prefer to have the workers obtain them from the plant dispensary. Another salting mechanism involves an electrically operated device for introducing a known amount of salt into a mixing tank.

Perspiration forms part of the heat-regulating mechanism of the body. Sweat is a weak solution of sodium chloride in water with traces of other salts. In hot climates the daily secretion may amount to 3,000 C.C. daily, in very torrid atmospheres it may be as much as 10 liters. (A liter of liquid is approximately equal to nine tenths of a quart). This makes imperative the drinking of an equal amount of fluid in order to maintain the normal water content of the body.

A study of working conditions was made recently by John B. Skinner and W. M. Pierce, Division of Occupational Hygiene, Boston, Mass., in a number of plants where hot processes are employed during the summer months. Of the numerous methods suggested for combatting high temperatures and their ill effects, 10 are considered useful by the authors. Here are some of the remarks made by the authors about those 10 methods. Salt tablets have come into use quite extensively, as mentioned above. To produce cooling air motion, circulating fans are in use. An improvement on this method is that of general exhaust ventilation. This is limited to a certain extent by the locality. In many cases, the source of heat is concentrated over small areas. Here local exhaust hoods, properly insulated to prevent re-radiation, are the logical answer to the problem. Instead of exhaust ventilation it is sometimes desirable to provide a supply of fresh air. It may be taken directly from outdoors or it may be cooled by water sprays. In the reduction of radiant heat, suitable baffles can generally be installed between high temperature sources of heat and the workers. Radiation from furnaces, kilns, driers, etc., can be prevented by proper insulation. Any enclosed humid process, according to Skinner and Pierce, is to be preferred to an open one from a health standpoint. Frequently a considerable amount of hot surface can be insulated. The adjustment of the working hours to avoid the hotter part of the day has some merit. It is practice in a few of the plants to allow the men to go home at noon on days when the outside temperature rises much over 90° F. In some cases, water was sprayed on the roof to minimize the effect of sun heat gain and to reduce the temperature of the air near the ceiling.

Heart and Air Cooling

Some workers in the flour and grain industry—as elsewhere in the world—suffer more from hot days and heat waves while other workers can stand them well. Heat affects the heart to a high degree. Of course, those workers are well off who have the blessed chance of working in an air-cooled room. A drastic reduction of the room temperature is of no avail. Twenty degrees below outside temperature are pleasant and there is no danger of catching cold. The cool atmosphere of the working room and the resulting cool poise of everyone working or resting in such a room are good for the nerves of the workers as well as for their hearts. Their working efficiency is being increased by air-cooling the work rooms.

So far only the smaller part of workshops, plants and houses are air-cooled in summer, and the average worker has to rely on approved methods of keeping cool on hot summer days. Some people feel refreshed after a hot bath on a warm day, followed by a hot drink: tea or lemonade. This sounds strange but the warm bath opens the pores of the skin, enabling the body to throw off heat rapidly. The drink aids perspiration flow.

This method is not to everybody's taste though it is recommended by experts. Many prefer cold showers and cold baths and iced drinks. Alcoholic drinks are best avoided during the day. They produce more body heat and accordingly increase heat suffering. Cold tea is a good thirst-quencher.

The old method of cooling the

(Continued on page 18a.)

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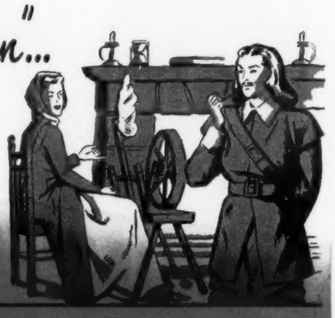

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BETTER BAGS SINCE 1858

Milling 60 Years Ago

Variations in Amounts of Offal

By Louis H. Gibson

OFFAL is that part of the milling product which is not sold as flour. It includes the foreign impurities from wheat, bran and tailings from the low grade flour reels. This latter product has different names in different parts of the country. It is called shorts, middlings, feed middlings and fine feed. Fine feed is the most common name.

The proportion of offal from the wheat, the foreign impurities therefrom, varies with different qualities and kinds of wheat. The average may change with different crops. One year there will be more screenings and light grains than another. It would hardly be worth while to give tables or statements which would represent the average amount of such offal at any one time, as the quality of stock varies in different parts of the country. For this reason statements or exhibits of this kind would be misleading, or, to say the least, valueless. Another reason for not giving these statistics is that, as regards the contained foreign impurities, the proportion of stock taken by different millers from wheat of the same quality may vary, and it may be that he who would take out the larger proportion of stock with his wheat cleaning machinery, would do this without adequately cleaning his wheat.

It does not follow that he who takes the largest amount of stock from the wheat in cleaning it, cleans it the most perfectly. One man may take out less than another and still send the wheat to the reduction machines in better order, in better shape for reduction. One miller may crowd his cleaning machinery, or it may be imperfect in arrangement, or the system may not include a sufficient number of machines, for which reasons he will clean his wheat in a wasteful way. He will not only take out stock which belongs to the wheat, but will leave in that wheat impurities which should be removed. There is material for offal in one part of the country which does not exist in another; for instance cockle. For the reasons here given, it would hardly be in order to give statements of the probable amount of offal which would be removed from the wheat. The conditions are so variable that nothing which could be said would have general application.

Offal from the reductions and separations varies in quantity and quality with yield. During the earlier times of buhrstone milling the effort was to clean the bran at the first reduction of the wheat, and it was only during the later years of that process—a few years previous to the introduction of new process methods—that any large number of millers reground the bran. It was not an unusual thing to hear it said among millers that they did not propose to make flour out of bran, that they would grind wheat and not bran, and all that. They would say that the bran was worth as much as the low grade flour, and often this was said without figuring to test the accuracy of the statement.

The dividing line between feed and low grade flour should be fixed by the price of both products. When feed is the same price as flour there is no need of milling it farther. At the same time that the feed is milled it should be borne in mind that it may be done so closely, so much of it may be pulverized, that it will depreciate the low grade flour to a very considerable extent, and to an extent which would render the operation unprofitable. Bran may be successfully reduced and cleaned profitably as long as the product of each reduction will sell for more than the feed. Now, it might be unprofitable to run the product of the various bran reductions or feed reductions together. The lower product of flour would contaminate the higher product, but there is no reason why the higher and lower products of low grade flour should be all run together as has been explained elsewhere, and for this reason bran may be cleaned according to the dictates of the market.

Red-dog feed may be the cause of a great deal of loss to the miller. It is more common to speak of clean bran than of clean red-dog feed. There are more and greater losses through carelessness in the cleaning of the red-dog stock than there

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are in the cleaning of the bran, for the reason that it is readily perceptible in the latter, while a great deal of stock may pass over in the red-dog feed without being noticed.

Some years ago, the Millers National Association offered a prize of a thousand dollars for the best bran compressing device. Such a machine would make it possible to export bran to the other side of the ocean—to Great Britain and the continent. The carrying charges would be less both in this country and abroad. The value of the product of mills everywhere would be enhanced because of the higher price which would be received for that product on account of the lower freights on the offal. A satisfactory machine for this purpose has not as yet been devised. It is an open problem, but one which will certainly take practical form in the course of time. The packing of bran would be a great help to American millers, as would anything which would enable them to market their products at a higher cost than at present. Another way in which the packing of bran will help American millers will be that it will not only help them to get rid of their offal at better prices than they are now getting, but it will also make a better market for their flour in the countries to which it is exported. It is known that many of the mills abroad realize their only profit from the offal, and if we step in with our bran and millfeed we cut them out of this profit, and in that way cut down their milling capacity and make room for our own flour.

Broad, clean bran is an indication of good milling. It means clean flour and clean feed. If the bran is badly cut up, and is in small pieces, it is a fair indication that a dangerous proportion of it has been pulverized and distributed through various grades of the flour. Broad bran suggests that the grinding has been well done, that the break flour is clean and bright, that the middlings were easy to clean, and the bran easily finished on the last reduction. An examination of the bran is often a key to the whole grinding. It shows the whole thing at once.

While speaking of bran and feed, other pertinent matters come to mind, but which are not associated with the above subject. It has been noticed that people in looking at bran would squeeze it and toss it up in their hand and say: "Well, what do you think this will weigh?" We are always compelled to say, "we don't know." But from motives of curiosity the trouble has been taken to ascertain. Those who would ask the question as to weight would have in mind the matter of yield; but the yield cannot be judged by the weight of the bran or feed. In experiments as suggested above, it was found that the bran weighed 15 lbs to the bushel, and that the same bran could be cut up so that it would weigh 30 lbs to the bushel. This was done by running the same finished bran through a bran roll which was set up very close. Afterward the flour was sifted out and the bran weighed with the above result. The red-dog feed, which was entirely red, with no signs of flour, would weigh more after it was ground than before. It is quite clear that the weight of bran and feed does not signify much in regard to the yield. A still more convincing proof is that in one mill, where it is with difficulty that the desired weight of feed can be gotten into a car, the yield may be slightly higher than in another where the bulk is much less.

There are found in the market three kinds of offal—bran, fine feed or shorts, and finished or feed middlings. The fine feed or shorts contains very fine bran and red and woolly fibre, while the feed middlings are of a reddish gray color, and the richest feed from the mill. It contains bits of middlings, small pieces of nubby bran, that is, bran with a small portion of adhering middlings, and perhaps some flour. Now, it is these finished or feed middlings to which objection is made; they do not belong in the feed pile. There should be two kinds of feed, bran and red shorts, or fine bran. Anything which goes to make the feed middlings look white or gray can be made into flour that is worth more than the feed. If the feed is white or gray, that is a sure sign that there is flour, or flour making properties, in it. Some will say that if this kind of flour is run into low grade it will reduce it so low that it would be better policy to run it into the feed pile. All this flour would not be so low, though a part of it would. That part should be taken out and barreled by itself. If it is not desirable to put in a packer for this extra grade, it can be run into sacks and run out once or twice a week. The great waste of high yields comes from this grade of feed.

v v

Editor's Note.—The preceding article is a reprint of a chapter from the now celebrated book, "Gradual Reduction Milling," written by Mr. Gibson and published by The Northwestern Miller 60 years ago. Mr. Gibson was a recognized authority on milling technology and his career embraced buhrstone milling and roller milling. Millers of today will find much of interest to them in his observations of 60 years ago.

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The Story of the Dover Laboratories

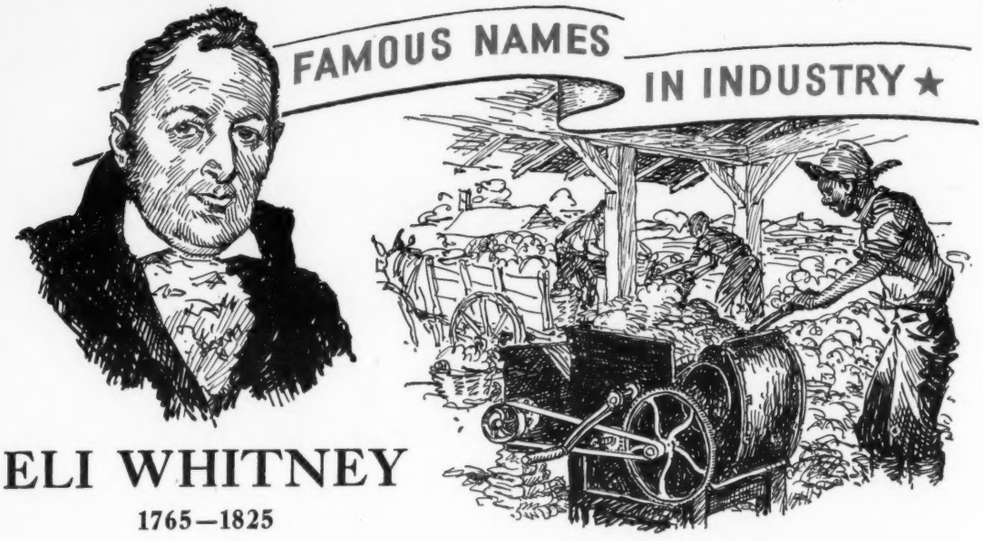
By L. F. Broekman
London Office, The Northwestern Miller

AT the invitation of Dr. D. W. Kent-Jones and his partner, Dr. A. J. Amos, I recently visited their laboratories — perhaps the best privately owned laboratories in England—at their temporary wartime premises at 88, Madeley Road, Ealing, W.5, one of London's most attractive suburbs. The new home of these laboratories is a private house, standing in the midst of beautiful trees and gardens gay with flowers, its many commodious rooms serving well the purpose to which they have been converted. The general office is on the right hand of the entrance hall and on the first floor Dr. Kent-Jones and Dr. Amos have their respective private offices, but the remaining rooms are utilized for the analytical and testing work, while set up in the former kitchen of the house is a bakery, with a full-sized commercial baker's oven for making baking tests of flour submitted for examination. It is an interesting fact that a large proportion of the millers of the United Kingdom and Ireland submit their flours regularly to these laboratories for examination as subscribers to the Control and Advisory Service the laboratories offer as a special feature of their work, although, nowadays, many of the mills have their own laboratories and staff chemists. Another important part of the laboratories' work is the examination and testing of imported wheats, representing the bulk of the total cargoes of wheat delivered at United Kingdom and Irish ports.

Dr. D. W. Kent-Jones, co-founder, with Dr. A. J. Amos of the Dover Laboratories. Dr. Kent-Jones is author of "Modern Cereal Chemistry" and "The Practice and Science of Baking."

The story of the "Dover Laboratories" is both adventurous and unusual. The business was founded by Dr. Kent-Jones in 1932, at Charlton Green, Dover, when he took over the well appointed laboratory of Woodlands, Ltd., the manufacturers of "Salox," a flour improver. Dr. Kent-Jones became associated with Woodlands, Ltd. (a subsidiary of G. W. Chitty & Co., Ltd., flour millers of Dover, the inventors of "Salox") in 1919, as their chief chemist. From his youth he had been keenly interested in chemistry, taking his B.Sc., with first class honors, in 1912, while attending King's College, London, becoming an associate of the Institute of Chemistry in 1913 and a fellow of the institute in 1917. However, in those days the science of cereal chemistry was practically unknown in Europe and even in America things were just as backward. The Englishman, William Jago, was among the first to make a study of cereal chemistry and his book—"Technology of Breadmaking" — became a universal textbook and is still recognized as an outstanding work on the subject. In America the American Association of Cereal Chemists had recently been formed and began publishing the journal which since has become world famous under the title it later assumed of "Cereal Chemistry," but its contents then, as compared with now, were of a very different caliber and character, for cereal chemistry, as it is known today, was quite in its infancy.

In 1926, Dr. Kent-Jones, who had applied himself seriously to the study of cereal chemistry, had conferred on him the degree of doctor of philosophy, the thesis securing him this honor being "a study of the effect



ELI WHITNEY
1765—1825

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of heat upon wheat and flour, especially in relation to strength." Other honors conferred on him during his professional career are a professorship (Honoris Causa) at the University, Belgium. He also has served three times on the Council of the Society of Public Analysts and other Analytical Chemists and is at present serving a second term on the Council of the Royal Institute of Chemistry.

In 1928 his growing reputation as a cereal chemist brought him an invitation to attend the convention of American Association of Cereal Chemists at Minneapolis. He says he was struck at the comparative backwardness of cereal chemistry generally in America at that time. Protein and ash tests still seemed to be the main tests of any consequence and little attention was paid to diastatic and other enzymic activities, but it was not long before cereal chemists in America were leading the world, a position which they have never relinquished.

In 1931 the patents for "Salox" expired and its manufacturers, Woodlands, Ltd., closed down. This gave Dr. Kent-Jones the opportunity to start on his own account as an analytical and consulting chemist and he invited Dr. A. J. Amos to join him as his partner. It was the continuance of an old association as Dr. Amos had worked with Dr. Kent-Jones in the laboratory of Woodlands, Ltd. They secured the laboratory of Woodlands, Ltd., and conducted their consulting practice under the title of the Dover Laboratories. Their enterprise met with such success that in 1935 they had to enlarge their premises for the first time and still again in 1938. They were greatly helped in establishing their practice as cereal chemists by their intimate connection with the milling industry throughout the country, gained by their association with Woodlands, Ltd., and the flour improver "Salox," which had a great sale among the millers. Dr. Amos took his B.Sc., with honors, in 1927, was made an associate of the Institute of Chemistry the same year and was elected a fellow in 1938. He took his degree as doctor of philosophy in bio-chemistry, in 1932, for a thesis entitled "A study of the bacterial flora of wheaten flour with special reference to its effect upon panary fermentation." He is serving a second time as a member of the Committee of the Food Group of the Society of Chemical Industry and is an able writer on scientific matters.

Dr. A. J. Amos, partner of Dr. D. W. Kent-Jones in the Dover Laboratories, London. Dr. Amos is now serving on the Committee of the Food Group, Society of Chemical Industry.

With commodious premises at Dover and a large staff the practice was forging ahead when the war started and in its train brought upheaval to this little hive of industry. Dover, at the tip of the south of England with Calais only 24 miles away, was a vulnerable and strategic spot. From here many ships set out to rescue the heroes of Dunkirk and brought them back to their homeland, and when the Battle of Britain began immediately after Dunkirk (June, 1940) Dover was in the very vortex of the struggle. One day, as Dr. Kent-Jones and Dr. Amos were nearing home on their return from a visit to London, the alert sounded and being members of the Civil Defense they immediately reported for duty. They had to remain on duty several hours and realizing that this would be a daily occurrence, and that all work would have to stop for the staff to take shelter, they made a quick decision to remove their laboratory to London, which, at that time, was considered a safe place. They had previously had the offer of some space in the premises of Procea Products, Ltd., who make a gluten rich bread. They, therefore, set up their laboratories in a corner of that factory, but there was the difficult question of the removal of all their equipment and the housing of their staff. The burning question was whether their staff would accompany them, for they all had their homes in the Dover district, so a staff meeting was called and an appeal made for volunteers. Most of them—some 22 men and

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women—responded and the next step was to find them accommodation in London. Dr. Amos spent a whole day on this quest and eventually rented two empty houses on the outskirts of Hanwell, the district where the laboratories would be located. No time was lost in the removal from Dover to London, and although the Battle of Britain was at its height and much destruction in process, several tons of precious equipment were removed and set up without the breaking of even a specimen glass.

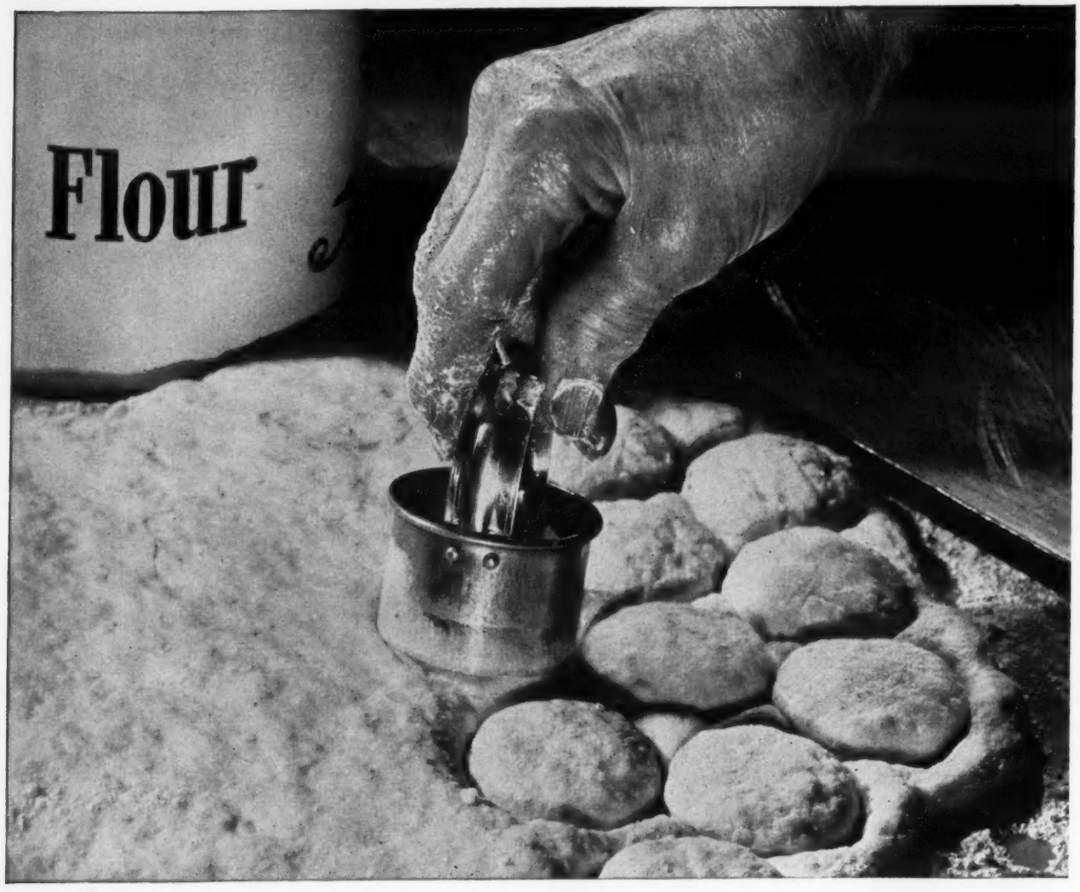
The staff removal and re-housing was not such an easy matter. At first there was little furniture and for a week and more the only sleeping equipment was mattresses and blankets on the floor. A communal life was started which continued for nearly two years. Dr. Kent-Jones and his wife were in charge of one house, and Dr. Amos, whose wife and child were in the West of England, was head of the other house, assisted by the staff baker and his wife. The chief meal of the day, taken in the evening, was communal, the residents of both houses joining at table, but the catering was difficult, for not only was there a restricted menu owing to rationing, but the likes and dislikes of the households had to be contended with. This task Mrs. Kent-Jones accomplished with great skill but many incidents occurred, amusing and otherwise, which had to be handled with tact and humor. The humor won out all the time and this mixed household was a happy one in spite of different points of view. It is a remarkable tribute to all concerned that employers and employed could live together in such close comradeship and complete harmony for so long.

The cramped conditions of the laboratories were the chief difficulty and eventually another move was made, this time to the present commodious and attractive premises at Ealing. The second move was made in April, 1943, and now the various members of the staff have established themselves in their own homes. Good fortune followed the laboratories all the time, for shortly after the removal from Hanwell to Ealing a flying bomb fell in the vicinity of their old quarters and did considerable damage to the premises.

In view of the rapid extension of the practice in food chemistry and other branches distinct from cereal chemistry, Drs. Kent-Jones and Amos decided soon after their second move to Ealing that they would not return to Dover. Therefore, they discontinued the title of "The Dover Laboratories" and adopted the names of the two partners as the title of the practice.

Last year, Dr. Kent-Jones celebrated his 25th anniversary as a cereal chemist. During that period he has made many valuable contributions to the science, both by his experiments and activities as a practical chemist and as author of many scientific treatises, articles, papers and books. Two of his books, which are much in demand, are "Modern Cereal Chemistry" and "The Practice and Science of Baking." "Modern Cereal Chemistry" has run through three editions and at present Dr. Kent-Jones and Dr. Amos jointly are at work on a fourth edition, which will probably run to between 800 and 900 pages and the bibliography will contain over 1,200 references. Another achievement of the first order by the joint editors is their monthly News Letter, issued privately to subscribers to the control and advisory service of the laboratories. In it is reviewed, with comments, all the latest developments in cereal research and chemistry, and British millers must receive much enlightenment and help from the publication.

Associated with Dr. Kent-Jones and Dr. Amos is W. Martin, B.Sc., their chief chemist and superintendent of the laboratory work, which normally includes the examination of about 200 samples of wheat and flour each week, together with a large number of analyses of other food products and assays of vitamin B_1, riboflavin, niacin, etc. A large thermostatically controlled and uniform incubator for use in these assays was designed and made by Mr. Martin, in co-operation with the maintenance staff of the laboratory, it being impossible to obtain such an apparatus from the usual instrument makers during the war, and it gives entire satisfaction. Another interesting apparatus especially designed in the laboratory is one for determining granularity of flours by the use of a photo-electric cell, while a new instrument for the measurement of the color of flour is in the experimental stage. Considerable work has recently come to the laboratory in connection with a new official order in respect to the carbon dioxide content of self-rising flour and baking powder. A number of baking tests also are carried out every day by George Austin, the test baker, who has been a member of the staff of the laboratory for many years and is much traveled, having often accompanied Dr. Kent-Jones on his visits to the continent for analytical and experimental purposes. Mr. Austin's son is also a member of the staff in the milling department. The staff has been much depleted owing



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to the call-up for the armed forces, some of whom have been selected for scientific work; others have taken part in all the campaigns, including "D-Day."

Throughout the war the laboratory has been of invaluable assistance to the milling industry in overcoming many of the difficulties with which it was faced and in contributing to the scientific headway which has been made in the production of flour during the war years. It also has been of inestimable service to the Ministry of Food and other government departments. With the rapid advance in scientific knowledge and the insistent demand for research in all branches of food production, the opportunities for expansion in the work of the laboratory in the postwar years would seemingly be manifold with increasing scope for the knowledge, experience and skill of its directors, at home and abroad.

L. F. BROEKMAN.

A New Book for Millers

"Flour Milling," by J. F. Lockwood. 511 pages, 223 illustrations. Northern Publishing Co., Liverpool and London. $7 net.

The author of "Flour Milling," J. F. Lockwood, is a director of Henry Simon, Ltd., a large British mill machinery and equipment manufacturing firm. Sir Ernest Simon, governing director of the firm, states in a foreword to the book: "It is unusual for a firm to publish the scientific knowledge that forms the basis of its success, but we have decided to do so both in our own and in the public interest."

Sir Ernest also states that "this book sets forth for the first time the main scientific facts and principles which are necessary to a full understanding of the many and varied aspects of the science of flour milling and of flour milling engineering." That is a rather sweeping statement, especially from a man who, in 1930, was the author of "The Physical Science of Milling."

Regardless of whether American millers agree with Sir Ernest's modest claim, the book by Mr. Lockwood definitely belongs in the library of every miller interested in a rather comprehensive discussion of milling, written, of course, from the English viewpoint. The author states in a preface that "modern milling machines are so largely standardized that it would be tedious to describe more than one of each type. . . ." And, quite naturally, since he had access to Simon machinery drawings and details, it is Simon machinery that gets the large share of the attention in his discussions of milling machinery.

But, regardless of the make of the machine used, the fundamental principles of flour milling are the same in the United States as in Great Britain. And Mr. Lockwood, in "Flour Milling," has presented an able discussion of those principles. In preparing the text matter, the author attempted to make the volume equally useful to the student and the experienced miller. Some parts of the book, therefore, assume on the part of the reader a fundamental knowledge of milling technology and the beginner may find it heavy going. On the other hand, there are some parts which the experienced miller will be inclined to gloss over as being too elemental for him.

The book is divided in three main parts: The first is concerned with wheat, its cleaning and storage plus descriptions of the operating principles of the machines used. The second part is devoted to discussions of grinding the wheat into flour and descriptions of the machines used. The third part deals with management problems.

An attempt has been made in one chapter of the book to acquaint operative millers with the various quality tests for mill stocks. The content of this chapter is similar in character to the series of articles dealing with cereal chemistry for the operative miller that are appearing currently in this journal.

"Flour Milling" certainly is a book that progressive flour millers should have in their libraries, to be added to such volumes as "Studies in Practical Milling," "Practical Milling," "Flour Milling," and other of the too few pieces of literature dealing with the science of flour milling.

Paul L. Dittemore.

——BREAD IS THE STAFF OF LIFE——

The nearer we can come to cleaning the bran material previous to the reduction of milling stock, the less is the waste. Thus, by keeping out the fifth break middlings from the body of the other middlings, the proportion of waste is less; and, while the bulk of middlings may not be so large where this stock is omitted, it will be cleaner, and for that reason the yield of patent flour from the wheat will be larger.—Louis Gibson in "Gradual Reduction Milling."

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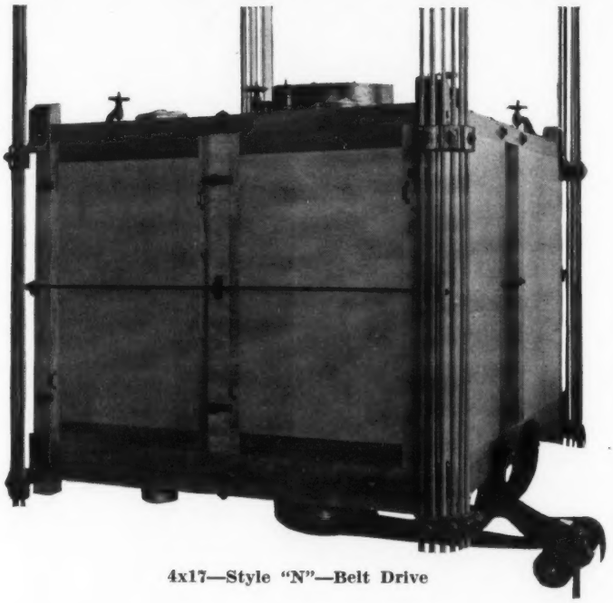

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Qualitative Tests

(Continued from page 6a.)

the unacidified silver nitrate solution is used, once one has learned to distinguish the nature of the different spots by their colors. The color of the silver chloride spots is decidedly purple, while those formed by silver phosphate are greenish gray.

The spots caused by the silver phosphate can be made to disappear at least partly by pouring dilute nitric acid over the exposed surface, leaving the purple colored silver chloride spots to stand out more prominently. The best way to proceed with this test is as follows:

In the first place have the silver nitrate ready before dipping the flour slick. The slick is then immersed for about 15 to 20 seconds and the silver nitrate solution should be applied without much delay after the slick is removed from the water. Then the slick is taken to a window and exposed to the light. Within approximately a minute, spots will form on the surface of the slick if the flour was actually treated with either or both of the two ingredients, salt and phosphate.

Further treatment with dilute nitric acid for closer distinction between salt and phosphate may be made as described above.

The approximate amount of phosphate added to a flour can be determined by comparing a treated slick of the flour with a slick of a set of flour samples with known phosphate content.

Avoiding Heat Stroke

(Continued from page 10a.)

whole body by immersing the hands in cold water has recently been reexamined by F. H. Koenig The practical conclusion of these studies is that cooling the face and the hands are effective means to prevent heat exhaustion.

Light, easily digested food will help to keep the body temperature down. Fruits, vegetables and salads are particularly appropriate on hot days, with only little fat and sugar. Most suitable are cold fruit juices and iced sherbets.

Light colors are preferable for clothing. White material keeps out the warm rays of the sun, the next best being a pale yellow. Putting the capacity of heat absorption for white at 100, we have 102 for pale yellow, 150 for light gray, 168 for red, 198 for light brown and 208 for black. Black clothing is more than twice as warm as white clothing. A draught of air may be obtained by opening opposite doors and windows, or by electric fans.

To avoid discomfort from heat, keep calm. If you feel like quarreling or getting upset—winter is the time for it. Any excitement speeds up the circulation and produces heat. Work helps in overcoming the unpleasant feeling of heat to great extent. Interesting, absorbing work distracts the thoughts—and the more we forget about the heat the easier it is to put up with it.

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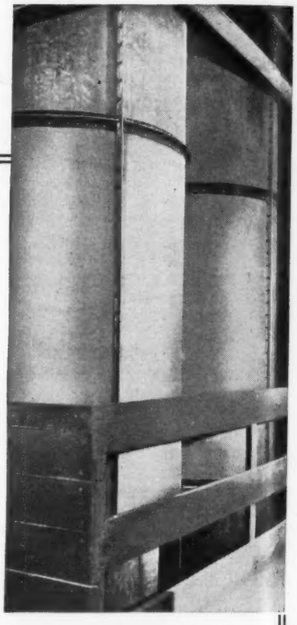

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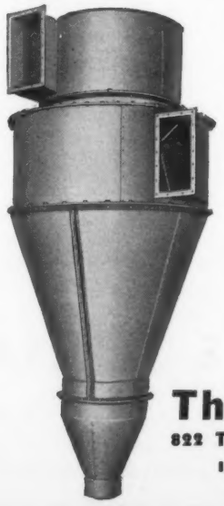

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Legal Obligations

(Continued from page 5a.)

uing the "temporary" war job as part of its regular, postwar operations. In this case, the veteran will probably be considered to have the re-employment rights of any permanent employee.

Of the countless jobs brought into being or altered by the arms program many will vanish with the end of the war; others will be borderline cases, part permanent, part temporary. You will have to settle every such case on its own merits in a common sense, practical way.

The employee and the employer may make an agreement canceling the veteran's legal re-employment right. The law is plain on this point: "Nothing contained in this act shall prevent (a) modification, termination, or cancellation of any contract, lease or bailment or any obligation secured by mortgage, trust deed, lien, or other security in the nature of a mortgage . . . pursuant to a written agreement of the parties thereto . . . executed during or after the period of military service of the person concerned. . . ."

This section has already been passed upon by a U. S. district court. The employer and the employee had agreed that either might terminate the employment at any time. Later, the employee, in view of his impending induction into the armed forces, entered into a supplemental agreement with the employer, incorporating the termination provisions by reference, and receiving as a new consideration the payment of certain sums while on military duty. The court sustained the employer's right to cancel the contract and declared that the serviceman had lost his right to re-employment. (Wright vs. Weaver Bros., U.S.D.C., Md., Aug. 15, 1944.)

When an employer claims that the right to re-employment has been waived, he must produce clear and positive evidence to that effect. The burden of proving that there was such a waiver rests on the employer.

You must prepare to face the situation in which a veteran asks for a better job than the one he left and refuses to accept the old one. His refusal ends your obligation to rehire, but unless you have proof of the refusal there may be embarrassment if the veteran should later decide to return to the old job he originally turned down. To protect yourself in such cases, ask the veteran to sign a written waiver at the time he refuses the job to which he is legally entitled. Include this waiver in your personnel records. There is certain to be a great deal of litigation on such questions in the postwar period when jobs are scarcer than they are now.

Note that where a veteran waives his re-employment right by refusing his old job, but is taken on later, he no longer enjoys other re-employment rights under the law, such as immunity from discharge for one year.

Are Probationers Temporary?

New York State's Director of Selective Service, Col. Arthur V. McDermott, has declared that a worker on probation is a "temporary" employee, not entitled to re-employment rights. Under the terms of many collective bargaining contracts, an employee may be probationary anywhere from 30 days to six months. During that time he acquires no seniority status.

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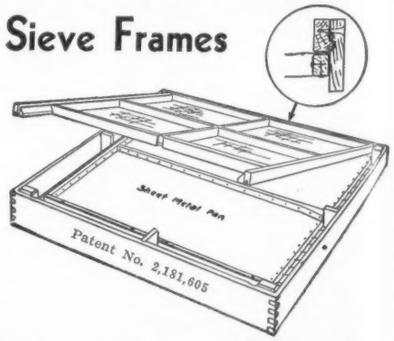

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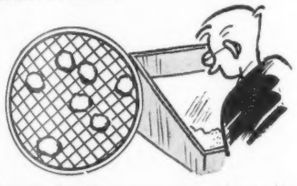

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The United States Civil Service Commission has ruled otherwise on probationers in federal employment. They are considered permanent employees and will be restored to their former positions on the pre-existing probationary basis.

Still Qualified to Perform

Although the law says that a veteran need not be rehired if he is no longer qualified to do his old job, this provision will be construed very liberally in favor of the returning serviceman. Selective Service has clearly indicated that a refusal to rehire will be justified only where the veteran is suffering from such mental or physical disabilities as would make it impossible for him to perform his former duties—for instance, a linotype operator who has lost his hands.

Note, however, that if the use of artificial devices would make it possible for the veteran to do his old work he cannot be considered "unqualified." Nor can an employer refuse to rehire a veteran on the ground that he has lost his old skill, or is not familiar with new developments, methods or procedures that are now used in connection with the job.

In such situations the employer will be expected to provide whatever training or education is necessary to fit the veteran fully for his former job.

Whether or not a veteran is "still qualified" is not to be determined on the basis of higher or more rigorous standards than existed before he left his job. Furthermore, he is not supposed to meet standards which the employer may decide to set for others with no re-employment rights. Where a position has been upgraded to such an extent that it is beyond the veteran's skill even after a refresher or retraining course, he is still entitled to a job comparable in skill and equal in seniority, status and pay.

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Chemistry For Millers

Gas Production and Retention

By Dr. C. O. Swanson

GAS production by yeast action and gas retention by gluten films in dough are two of the most important factors in the production of light bread. Factors which influence rate of gas production were discussed in the preceding article in this series. Methods were shown by which the rate of gas production may be measured. It was also shown that with only minor modifications the same apparatus may be used for measuring gas retention in dough.

Relationship of Gas Production and Retention

Measuring loaf volume is a usual means of determining whether gas production and retention in dough are good or poor. The amount of expansion in dough (and hence loaf volume) depends both on the production and the retention of gas since there is a relationship between the rate produced and amount retained. That a high rate of production results in proportionately greater retention as measured by loaf volume was shown by Markley and Bailey, (1931). The use of 3% of high diastatic flour increased the average loaf volume of 17 flours from wheats grown in central western Minnesota from 337 cc to 567 cc or 68%. The loaf volumes of a similar series from northwestern Minnesota were increased from an average of 357 cc to 532 cc or 49%. Without the use of the high diastatic flour, the loaf volumes and textures were unsatisfactory because of the deficiency in the diastatic enzymes needed to support adequate yeast fermentation.

Gas retention is one of the most unique characteristics in dough made from wheat flour. This property of retaining gas is due to protein found only in wheat. If the substances which are naturally present in flour do not adequately support the rate of gas production, the lack can easily be remedied by the addition of sugar and diastatic malt. Gas retention, however, depends on factors inherent in the gluten. Defects from this cause cannot be remedied as easily as the lack of gas producing capacity.

Comparison of the Rates of Gas Production and Retention

The upper curve in Figure 1 shows the progress of the rate of gas production over a period of a little more than seven hours in comparison with the rate of retention shown in the lower curve (reading from left to right). The close proximity of the curves at the left indicates that at first most of the gas produced is retained. The progressively widening distance between the curves indicates that a decreasing percentage of the amount produced is retained. The steep ascent in the production curve persists until the sugar added to the dough formula is consumed. After that the rate of production is distinctly slower because of dependence on the sugar produced by the diastatic enzymes. Near the time at which there is a drop in the rate of production, there is a sharp decrease in the rate of retention.

Measuring Gas Production and Retention

The apparatus employed for making these curves uses the pressure principle and was designed and constructed by Dr. Earl B. Working. The outlines of the curves are marked by electric sparks which burn one hole every four minutes in the graph paper held on a slowly revolving drum. The retention curve is made to start behind the production curve so as to keep the two apart at the beginning. For these curves this distance corresponds to one hour and this must be considered in comparing points on the two curves. The height at any point indicates the pressure exerted by the gas on mercury. On its surface rests a float which supports a wire with a pointer which conducts the current to produce the sparks. The numerical value of the pressure is measured in millimeters on the chart paper. This value can be converted to volume in cubic centimeters. The distinct drop in the rate of production occurred in about 3 hours and 20 minutes and the sharp drop in the retention rate also occurred near this time.

Formation of Gluten Which Retains Gas

Gas retention is made possible by the properties of the gluten which forms the gas cells or bubbles in the dough. Raising of dough by yeast fermentation would not occur without the unique properties of the gluten. Much study has been given to the properties of this gluten because on its capacity to form cells or bubbles of the desired size and distribution depends the loaf volumes and textures of the baked bread. Particular reference is given to: Swanson (1925, 1937, 1943); Baker (1941) and Baker and Mize (1941). There are also many others.

The two factors which enable the protein molecules in wetted flour to assemble into particles are their great attraction for water and their configuration. These facilitate their sticking together to form the larger particles which then may be assembled into the familiar gluten mass.

The protein material exists in such small units in the endosperm of the wheat kernel and hence in the flour particle that their outlines cannot be seen under the microscope, in contrast to the starch granules which can easily be seen. As soon as flour is adequately wetted, the protein particles start to draw together into larger aggregates. This can be seen by examining a dispersed piece of dough under the microscope. (It is necessary, in microscopic examination, to use a stain which differentiates between the gluten particles and the starch granules.)

Because of this tendency to assemble when wetted it is possible to make a separation of gluten from the starch by the process of washing in water. The manipulation with the hands, squeezing and stretching, aids in the joining of the gluten particles to each other so that finally the gluten wad is obtained. This wet gluten consists of about two thirds water held so firmly that it cannot be

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squeezed out by hand pressure. A calculation will show that the amount of water thus held in the gluten comprises about one third of the total water in dough of average consistency.

The water holding capacity of gluten as compared with starch which occurs in flour is about six times greater than the protein.

Mixing Needed to Form Dough

A certain amount of stretching is necessary for the formation of dough. Baker (1941) states: "Desirable mixing methods involve the operations that stretch, fold or squeeze the dough, such as are obtained in the Swanson or in the McDuffee mixer. . . . There appears to be some magic in the stretching of dough which cannot otherwise be obtained." The appearance of dough at various stages of mixing was shown by Swanson and Working (1933). When the mixing was just sufficient to wet the flour, the usual dough characteristics were not evident. When adequately mixed, the dough presented one continuous smooth mass. When overmixed, lack of coherence developed finally to such an extent that the mass was more like a paste than a dough. Even the slight amount of mixing used preparatory to gluten washing involves a certain amount of stretching. Kneading dough by hand involves less stretching than machine mixing and hence takes longer time for proper development. Even then the same smoothness may not be attained, especially with high protein hard wheat flours.

Gluten Structure in Dough

In a properly mechanically devel-

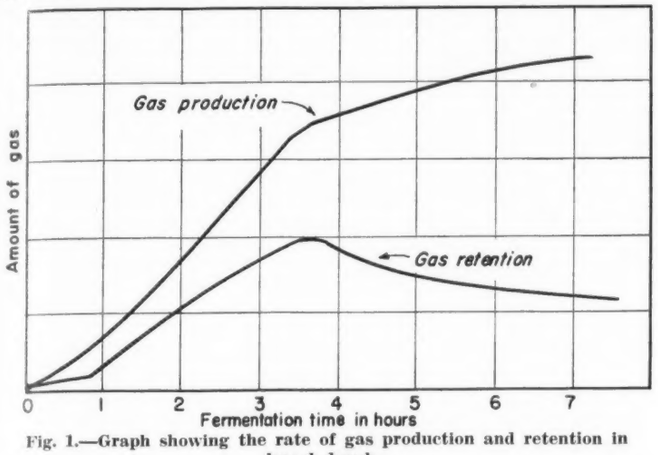

Fig. 1.—Graph showing the rate of gas production and retention in bread dough.

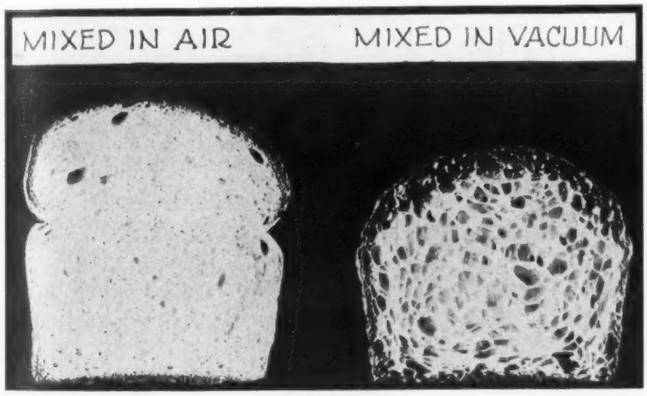

Fig. 2—This picture shows the differences in cellular structure of breads that have been mixed in air and mixed in vacuum. Illustration by courtesy of Dr. J. C. Baker, Wallace & Tiernan Co., Inc.

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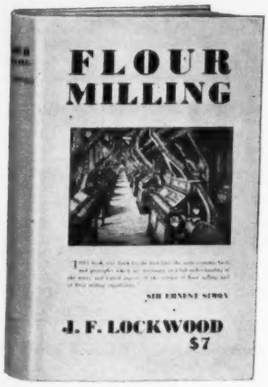

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oped dough, the gluten seems to exist in a continuous three-dimensioned network in which the starch granules are embedded. The formation of such a network is made possible by the structure of the protein particles and their strong attraction for water. This structure facilitates the uniting of the particles into strands or fibrils which are covered with water films. The water gives mobility to the dough and the strands bind the whole together into a continuous dough mass.

Emulsified Air in Dough

The air emulsified in dough by the mixing process often receives little notice, but this air is necessary for the production of fine textured bread, according to Baker and Mize (1941). The main bulk of the dough consists of water, starch and protein which is mostly in the form of gluten.

Sugar and salt exist in solution in the water or are adsorbed on the starch and the protein. Yeast is distributed as microscopic cells throughout the dough. Dough mixed in air may have 8% of its volume occupied by gas voids or cells according to Baker and Mize (1941). Figure 2 shows that the bread crumb from dough mixed in vacuum had few large cells resulting in a coarse texture. The crumb from dough mixed in air was of fine texture due to many small and evenly distributed cells. Incorporating the carbon dioxide gas produced a bread crumb similar to mixing in air. However, if the dough was mixed in carbon dioxide and then subjected to 80 lbs pressure per square inch so as to drive out the emulsified gas, the texture was like that obtained by mixing in a vacuum. Thus for the production of the desirable fine crumb texture in bread, air or a gas must be emulsified into the dough during mixing. The air emulsified during the later portion of the mixing was shown to be of most importance. This demonstrates that the small gas cells in dough which are essential to the production of fine textured bread originate in tiny pockets of air emulsified or inclosed in gluten material. Punching and molding created a greatly increased number of cells by subdividing those already present. This provided gluten particles enclosing air nuclei or pockets from which more cells could expand.

Structure of the Gas Cell

The gas cells in dough, according to Baker (1941), are composed essentially of thin glutenous walls which are capable of expansion. These walls which constitute the partitions between the gas cells were covered with an impervious continuous film of gluten on each surface towards the gas. It is this film which gives the bubble its gas retaining properties. The starch was carried between the cell walls. The gas nucleous of emulsified air from which the bubbles originate is contained in a small portion of gluten. As the bubble expands due to production of the gas carbon dioxide by yeast, the walls need more gluten to maintain their continuity. This additional amount of gluten needed for the expanding wall first uses the gluten in the nucleous in which the cell originated and then more gluten is drawn from that in the starch gluten matrix of the endosperm material (Baker, 1941). Thus there must be an adequate fluidity due to water so that gluten can move from the place where it is more concentrated into the expanding wall. The beneficial effects from punching are due to the collapsing of the glutenous cell surfaces and thus providing new glutenous centers in which emulsified gas nuclei can develop and form thin gluten walls enclosing smaller cells.

From what has been said it follows that the capacity of dough to retain gas, and hence form bread of desirable volume and texture, depends on two main factors: (1) There must be a sufficient amount of protein to form the needed number of cells, and (2) the quality of the protein must be such that the cell walls of the desired thinness have adequate strength to retain the gas.

These factors will be discussed in next month's article.

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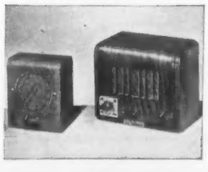

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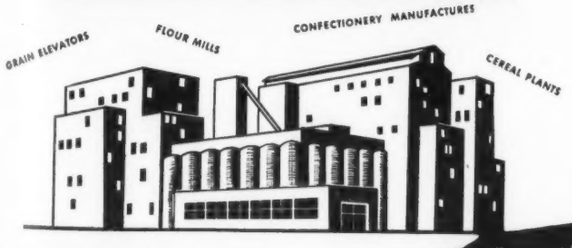

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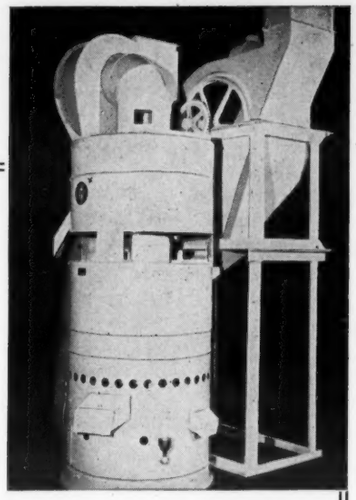

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☆ *Appraisers to the Milling and Grain Trade* ☆

Wooden Plow Shares, as in Biblical Times, Are Still in Use in the Holy Land

Egyptian Harvest Methods Unchanged

(Continued from page 3a.)

stones for other neighborhoods where such suitable raw material was not available. We may be sure that there was plenty of wheat around Lake Galilee to make whole wheat flour, but we saw no fields which would yield 100 fold, nor 60 nor yet 30. Wheat in the Jewish settlements in the bottom lands had already been harvested and may have been, probably was, higher yielding.

Driving back to the good hotel at Tiberias, we stopped a moment at the electric-powered, modern, 50-sack flour mill, near Tiberias. There is an ice plant in connection. The miller is an Argentinian. The wheat ground is Canadian Rendova (looks like Dr. John Parker's Tenmarq) and some Australian. He required high protein wheat and the native white wheats make good pastry and flat cakes but not good bread flour.

Looking at the heavy millstones recalled a word of the Great Teacher who has been overemphasized as being pacifistic. Indignant at a certain brand of scoffers, he said they should have a millstone tied to their necks and they should be cast into the sea where it was deepest. There would not be any question as to the result, and it might be the way to dispose of some of these war criminals.

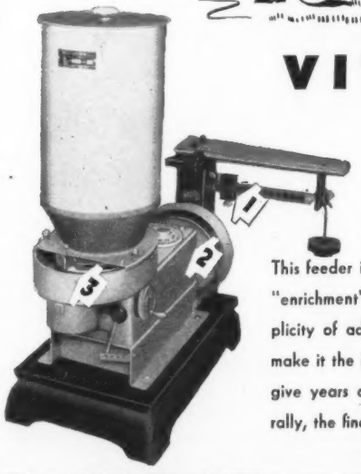
DON'T WORRY ABOUT

FLOUR ENRICHMENT

Omega

VITAMISER

INSURES ABSOLUTE UNIFORMITY



This feeder is a precision machine designed especially for "enrichment" requirements. Its constant accuracy and simplicity of adjustment to obtain the desired rate of feed make it the ideal feeder for vitamins. Yes, and it's built to give years of dependable, trouble-free operation. Naturally, the finer mills use OMEGA.

May we tell you all about this Vitamiser?

1. CONSTANT CHECK: weigh scale, at a glance, shows amount fed.
2. INSTANT CONTROL: hand wheel adjustment of a dial having 100 graduations.
3. SIMPLE MECHANISM: design of feeder guarantees even distribution and continuous feeding.

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FLOUR BLEND

Sodium Bicarbonate

PITTSBURGH PLATE GLASS COMPANY

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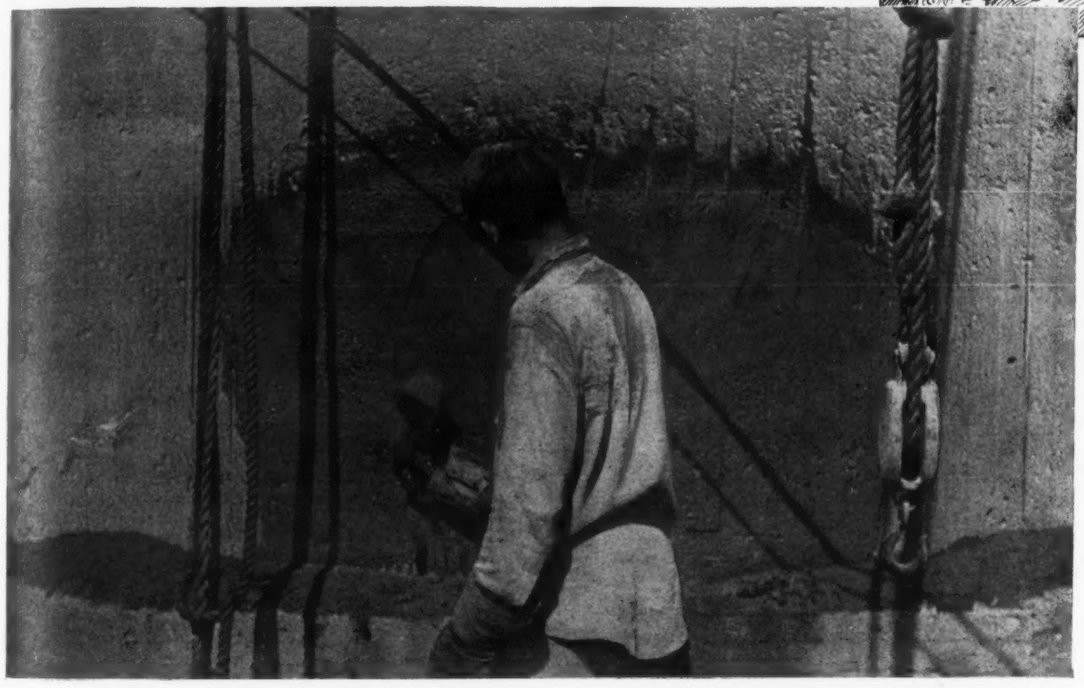

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This cavity in the side of a grain silo has been cleaned back to sound concrete, just as your dentist removes decayed material in a tooth. The workman is filling the cavity with pneumatically applied concrete.

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Your Concrete Dentist Can Prevent Trouble, Too

Concrete, like a human tooth, is subject to external attack and resultant decay. Water and gases seep through the pores of concrete and create a chemical reaction deep inside the silo wall. Hidden damage occurs much as hidden decay between your teeth.

Mending concrete cavities is a job for experts. Daubing the crumbling surface with mastics is no remedy for decayed concrete. Western Waterproofing engineers are experts. They have the "know-how" to put your concrete structures back in first class condition. Let us consult with you regarding your problem.

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With 25 years of wide experience in reconditioning heavy construction, Western Waterproofing Co. is glad to furnish you with numerous references from those who have used the service.

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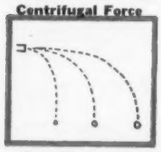
COMBINES THREE GREAT PRINCIPLES

Centrifugal Force



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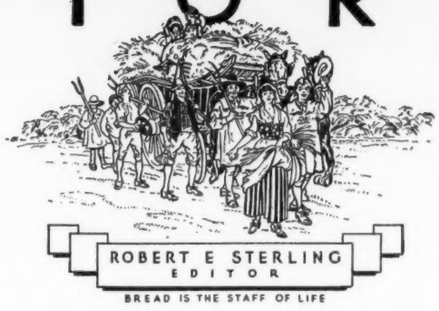
EDITORIAL



BETTER MILL HOUSEKEEPING

THE United States Food and Drug Administration is reported to be quite disturbed because of the upward trend in the number of cases of insect infestation of flour. The bureau's responsibilities include the obligation to make sure that food manufacturing plants are clean and that the products will not be made under conditions which may result in contamination.

Inspectors of the administration are checking up on flour mills. They report that insect infestation is not confined or limited to small mills. Serious infestation has been found in large mills.

Perhaps a hint of what action the Food and Drug Administration could or might take against a company whose manufacturing plant is infested was contained in an address made by Roy S. Pruitt, chief of the bureau's St. Louis office. In the address, made before a gathering of operative millers in St. Louis, Mr. Pruitt stated that the Pure Food and Drug Act empowers the enforcement agency to obtain injunctions against the mills, prohibiting them from shipping the flour in interstate commerce.

That course of action has not been invoked against any member of the milling industry thus far. Such an action was taken, however, against a bakery because of the fact that the inspectors found that the baker's products were being produced under insanitary conditions.

Mr. Pruitt mildly scolded the millers when he said that "too many industries spend millions of dollars trying to make a good product out of a bad situation instead of trying to correct the situation itself."

The naming of flour milling companies in federal citations and notices of judgment in connection with flour seizures is being discontinued in instances where the mill clearly has no responsibility. The Food and Drug Administration, its officers point out, has no intention of making a horrible example of any milling company, but they do add, in a firm voice, that it is their responsibility and intention to make sure that all food products, including flour, reach the consumer in a sanitary condition.

Just what the solution to the infestation problem may be is difficult to suggest. Some mill managers rightfully claim that they cannot obtain sufficient help in the mill to keep the plant as clean as they would like it.

In all too many instances flour becomes infested after it leaves the mill—either through shipment in an infested boxcar or through storage in an infested warehouse. The miller's claim in the past is that he has no control over those conditions. Many mills, however, have assumed at least a part of the responsibility by doing all in their power to prevent infestation while their product is either in transit or in storage.

It all adds up to the plain fact that flour millers will profit by doing their utmost to see that their mills as well as their flour is clean. Clean flour alone will not satisfy the Food and Drug Administration.

Perhaps the whole infestation problem will be licked after the war by the use of DDT in treatment of flour containers, boxcars and warehouses. But that does not solve the problem of the moment. Better housekeeping seems to be the only solution at hand.

• • •

It is not in the power of the government to make everybody more prosperous. It can raise the income of the farmers by forcibly restricting domestic agricultural production. But the higher prices of farm products are paid by the consumers, not by the state. The counterpart of the farmers' higher standard of living is the lowering of the standard of living of the rest of the nation. The government can protect the small shops against the competition of department stores and chain stores. But here again the consumers foot the bill. The state can improve the conditions of a part of the wage earners by allegedly pro-labor legislation or by giving a free hand to labor-union pressure and compulsion. But if this policy does not result in a corresponding rise in the prices of manufactures, thereby bringing real wage rates back to the market level, it brings about unemployment of a considerable part of those willing to earn wages.—Ludwig von Mises, in "Bureaucracy."

• • •

AN ESSENTIAL INGREDIENT

AS this journal so often has said to the wholesale baker, there is danger in too much self-assurance concerning the quality and taste appeal of his loaf. It is good, but not too near perfect to offer safe defense against all criticism. Research and experiment may have brought discouraging or unprofitable results, but these should not be allowed to become definitive. The loaf of tomorrow need not necessarily be tied to today's sales record.

These truisms are recognized and even professed by most wholesale bakers, and yet there is a pretty tough protective covering in their attitude toward the customer. This attitude seems to be fairly well expressed by one who may properly be considered a representative spokesman. Vernon C. Usher, president of the Bakers Club of Chicago, says in the club's "chatter" letter:

"In my judgment every baker is making an honest effort to please his customers. There is nothing very much wrong with the quality of bread produced today. The matter of flavor is so debatable. Perhaps it could be improved somewhat. The sweet cereal fermentation flavor so often mentioned probably is covered up to some degree in some cases, but, everything considered, bakers' bread is good. In no other form can you buy so much good wholesome food for so little money."

Mr. Usher thus shows less concern with bread's quality and attractiveness than with the way it is promoted. This, he thinks, is the industry's weakest line of defense and its chief vulnerability to such attacks as the recent outburst in Reader's Digest, which was "simply another case of preying upon the ignorance of the people." It is the industry's fault, he complains, that these things should happen to it. "We have failed," he says, "properly to educate the consuming public as to the real true value of bread—thus fortifying its position in the minds of mankind."

Nobody complains about milk. Doctors approve of it. Everybody accepts it. No faddist would dream of writing about it an article entitled, "No Matter How You Bottle It, It Isn't Fit to Drink." And why does the dairy industry enjoy such immunity from public criticism? Mr. Usher says it is explained by the fact that the industry has done a good selling job.

The parallel between milk and bread may not be exact—though it ought to be. But without raising or prejudicing the notion that there still is something that might be done as a continuous policy and program of the wholesale baking industry toward production of a more universally satisfactory loaf, there can be entire agreement with Mr. Usher upon the matter of persuading the public of the merits of bread as it is. "Telling the world" is that indispensable "something-added" which is as vital to the whole problem of maximum bread consumption as any of the essential ingredients of the loaf itself.

• • •

OUT OF THE BEAN BAG.—Add beans to the foods we should fret about. Congressman William A. Pittenger joins with the former Indiana congressman, Sam Pettengill, in mutual fear that present OPA policies will bring about a bean shortage, and suggests that we should divert a few of our tears from meat hook, butter crock and sugar bowl to the neglected bean bag. One of Pettengill's recent "Inside Your Congress" articles contains this proteid apostrophe: "Consider the mute, meek bean, my friends. No poet ever wrote a sonnet on the bean; no oil painting of the beautiful bean adorns our galleries; no sculptured marble bean rises majestic in our public squares; nor have we ever been lulled to reverie by a symphony in bean minor. This is grossly unjust. For truly the sturdy bean has served Britain better than Wellington, and America better than Bowles. Melt up the bronze generals, turn the portraits of bureaucrats to the wall, but give the bean its place in the sun."

• • •

CONTRACT TROUBLE

ALTHOUGH it is not possible for us to understand from this distance all the considerations in the case of the Chicago Board of Trade directors to liquidate the July and September corn futures contracts with no penalty, it seems to be an arbitrary and dangerous move in the face of circumstances which surround all futures trading.

Granted that ceilings make a difficult situation under which to operate, and that an unusual supply position causes those who expect to deliver to find themselves greatly embarrassed, many grain men nonetheless find in this decision (to impose no penalty for failure to fulfill a contract) a weakness in the whole structure of futures contract markets that will be seized upon by enemies of our way of grain marketing.

It can be said now by opponents of futures trading that it really never has been a contract market, and must be considered only speculative and certainly not a bona fide hedge. Those who have sold cash corn and covered in the Chicago futures will attest to that, but now, incidentally, will find little sympathy from their buyers who still want the corn.

Regardless of the reasoning behind the decision, it must be admitted that many will point to the luxurious position of the man who sells short at the ceiling. His is the chance to gain sharply if something should weaken the market. But he has no opportunity to be penalized either by being forced to find and deliver the commodity or to pay damages.

The corn market, except for the prospect that the Kansas City futures market may be handled in a different manner, has suddenly become strictly a cash affair, with no hedge, no index of future values, and few men with the heart to help open another contract month lest it, too, becomes merely a gesture.

Those who trade in futures contracts, in our opinion, should be fully aware of the considerations before they make transactions. In this case, such a realistic viewpoint would have caused far less trading, would have left a small open interest that could have been satisfied, and would have protected the sanctity of that kind of contract. To bring the highest possible price to the farmer, to maintain orderly marketing and to permit the grain trade to function with sufficient economy to justify its existence, we must have futures markets. Incidents such as this action strip the market of its function and dignity, and make it far more vulnerable to attack.

Canadian ★ ★

CONDUCTED BY A. H. BAILEY
Manager Canadian Branch
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Vancouver Wheat Exports Only Half of Last Year, But Expected to Gain

Vancouver, B. C.—While export shipments of wheat from this port in the crop year ending July 31 were just a little better than half the volume moved the previous year, the prospects at the opening of the 1945-46 season on Aug. 1 were much brighter.

Export loadings here for the past season were 10,146,543 bus, compared with 17,668,286 bus the previous year, but it must be remembered that the latter figure was made up to a large extent of Commodity Credit Corp. purchases for Pacific Coast feeding, while last season's movement was for overseas.

July exports were the largest of the season, some 3,615,466 bus to various destinations. Much of this was on government orders, but it also included one full cargo for private account to Peru and also a shipment of 3,000 tons to South Africa. This latter movement was the first from here in a long period and might have been considerably larger but for the scarcity of ships. Originally it was planned to move many times that amount but in the absence of Pacific tonnage, the shipment was made from Atlantic ports.

Movement in the current crop year will depend almost entirely on the amount of tonnage made available here. Already many ships originally scheduled to load wheat here for world trades have been diverted to war trades and until the Pacific war reaches its climax, this shortage is expected to continue.

Current prospects for August are for a movement somewhat around the July total. Elevator stocks here are ample for any large movement. There are some 14,000,000 bus now in store with millions of bushels available in country elevators for shipment here as needed.

The neighboring ports of New Westminster and Victoria had only limited exports last season. The former moved 373,332 bus, against 881,654 bus the previous year, while the latter's figures were 282.213 and 201,033 bus, respectively.

Lake Shipments of 524,000,000 Bus of Canadian Grain Set New Record

Toronto, Ont. — Canadian shipments of grain from the head of the lakes in the crop year ending July 31, 1945, amounted to 524,000,000 bus. This is the largest movement through Fort William and Port Arthur in Canada's history and far outstrips the previous peak of 1928-29, when 386,000,000 bus were shipped. Shipments have been high all during the crop year.

Even before navigation closed last fall, 257,000,000 bus had been moved from the head of the lakes. Of the total shipments more than 300,000,000 bus represented wheat exported through both Canadian and United States ports. The bulk of this grain is going to liberated countries in Europe.

Since V-E day, grain has taken an important place in Canada's export trade, almost offsetting declines in war goods shipments. It is estimated that in order to meet requirements it will be necessary to move 28,000,000 to 40,000,000 bus per month through Canadian seaports and from 10,000,000 to 12,000,000 bus a month through United States ports.

It is also estimated that Canada will start the new crop year with a wheat carry-over of 275,000,000 to 285,000,000 bus, compared with 355,000,000 bus visible a year ago. Current Canadian crop prospects, which are discouraging in some areas of Saskatchewan and Alberta, are for a crop of around 300,000,000 bus. In fact, some say that Canada will be lucky if that total is achieved. Last year's wheat crop amounted to 435,535,000 bus.

——BREAD IS THE STAFF OF LIFE——

CONVENTION BAN EXTENDED

Toronto, Ont.—The ban on Canadian conventions first put on for the period of June 20 to July 20 has been extended indefinitely and the annual meeting of the Independent Master Bakers Association of Ontario, scheduled for Oct. 16-17, may be off. This will depend on whether this regulation is suspended in the meantime. The congestion in hotel accommodations and railway facilities made it imperative for the authorities to prohibit gatherings of this kind for the time being.

——BREAD IS THE STAFF OF LIFE——

NEW CROP ONTARIO WHEAT MOVING TO MARKET FREELY

Toronto, Ont.—Good progress is being made with the harvesting of winter wheat in Ontario under most favorable weather conditions. The grain now is beginning to move freely to market. The quality is good but some of it is a little high in moisture content due to heavy rains in various stages of the growing and maturing period.

The acreage of this grain to be harvested is 662,000 against 668,000 last year, from which the yield was 20,908,000 bus.

The condition of spring crops in Ontario has improved greatly. Some oats and barley have been cut, but little threshing has been done as yet. Corn is looking well, but is late and may suffer from early frosts.

——BREAD IS THE STAFF OF LIFE——

TO REQUEST APPROVAL OF BRETTON WOODS AGREEMENT

Toronto, Ont.—An announcement by the Canadian minister of finance, Hon. J. L. Ilsley, states that parliament will be asked at the forthcoming session to approve concurrence in the financial set-up agreed upon by Great Britain, the United States and their allies at Bretton Woods. Mr. Ilsley also stated that there is no foundation for the rumors current in New York and London that the Canadian dollar is to be placed on a parity with United States dollars.

Mr. Ilsley went on to say that Canada has not been enriched in terms of American dollars by the war. On the contrary the dollar balance against this country has increased during the war period.

At its coming session parliament will be asked to approve an international currency with fixed rates of exchange between the participating countries. Also, it will be asked to authorize an international bank for postwar purposes. The Canadian government welcomes the decision of the United States to participate in these efforts to encourage world trade.

In the meantime exchange control is to continue in Canada until the monetary fund provided for in the Bretton Woods proposals becomes fully operative. In reality there are no restrictions between Canada and the United States on current account transactions. The real difficulty at present is in the position of the pound sterling in relation to Canadian and United States dollars.

Canada is pledged to put up $300,000,000 in United States currency as her contribution toward the capital structure of the proposed monetary fund. She will also participate in the international bank arrangement by putting up $325,000,000 in United States funds for banking purposes.

A. H. B.

——BREAD IS THE STAFF OF LIFE——

WILLIAM E. REID DIES

Winnipeg, Man.—William E. Reid, a member of the Winnipeg Grain Exchange for the past 41 years, died suddenly on July 20. He was 64 years old. Born at Bayfield, Ont., Mr. Reid came to Winnipeg in 1899, and shortly after his arrival entered the grain business with the Muir Grain Co. He became a member of the Winnipeg Grain Exchange in 1904, and 17 years later incorporated his own organization under the name of the Wm. E. Reid Co., of which he was president until his death. A keen golfer, Mr. Reid was a member of several clubs.

NEW CROP ALBERTA WHEAT MOVES TO ELEVATOR

Winnipeg, Man.—Harvesting of early barley, winter wheat and fall rye is now underway in the extreme southern part of Alberta, and the first load of new barley and new wheat was delivered at an elevator at Burdett, Alberta, last week. The cutting of spring wheat, however, is still some time away. Burdett is roughly 50 miles southwest of Medicine Hat.

Substantially Lower North American Carry-over Predicted

Winnipeg, Man.—The carry-over of old wheat in North America at the end of the 1944-45 crop year will be substantially lower than was anticipated a month ago, according to a survey by the Dominion Bureau of Statistics.

The reduction has resulted from a heavier export movement than has been anticipated, the bureau said. It now appears that the combined carry-over of old wheat in Canada and the United States at the end of their respective crop years will not exceed 550,000,000 bus. A year ago the carry-over totaled 672,000,000.

Canada's prospective year-end stockpile of wheat is being rapidly whittled down by a vigorous export program, said the bureau. Overseas clearances of wheat and wheat flour have passed the 40,000,000-bu mark during each of the months of May and June.

Total exports for the crop year may equal the 344,000,000 bus exported in 1943-44. Although no official estimate of the carry-over will be available until Aug. 17, it does not appear likely that more than 285,000,000 bus of old wheat will be held over into the new crop year.

While the prospects for the Canadian spring wheat crop are bright in some sections of the prairies, many farmers will find that the present 14-bu limitation on deliveries will cover all the wheat which they have to sell. It is not unlikely that Canada's exports of spring wheat in 1945-46 will equal or exceed her production, which would mean a greatly reduced carry-over at the end of July, 1946, the bureau said.

——BREAD IS THE STAFF OF LIFE——

CENSORSHIP REGULATIONS BEING RELAXED IN CANADA

Toronto, Ont.—One of the many signs that war has diminished is to be found in the fact that Canada is unwinding the red tape of her censorship. The office in Toronto which has had control of this business for a part of eastern Canada is closed and the records have gone to Ottawa. From there the censoring of letters, newspaper copy and all the other functions of this particular war activity will hereafter be conducted. There will still be a certain amount of supervision but the more intimate forms of censorship will not be noticeable to the ordinary citizen. Of course, the Japanese war involves some attention and will until that conflict is ended. Whenever any matter arises in press or business circles which seems to call for consideration those responsible are under obligation to consult the office in Ottawa and arrangements have been made for telegraphic service at the expense of the board of censors whereby this may be done. Quick attention to all such requests for rulings is assured.

Statistics on Flour Production

(Continued from page 20.)

TABLE A—1943 U. S. DAILY RATED AND ANNUAL FLOUR MILLING CAPACITY BY REGIONS* (Sacks)

Regions	All Mills		Mills Over 2,000 Sacks Daily		Mills 2,000 Sacks and Less Daily	
	Daily	Annual	Daily	Annual	Daily	Annual
Kan., Neb., Colo..	205,418	62,857,908	131,109	40,119,354	74,309	22,738,554
Texas, Okla.....	114,797	35,127,882	77,339	23,665,734	37,458	11,462,148
Mo.	97,304	29,775,024	73,715	22,556,790	23,589	7,218,234
Minn., N.D., Mont.	155,332	47,531,592	118,862	36,371,772	36,470	11,159,820
N. Y.	114,111	34,917,966	105,322	32,228,532	8,789	2,689,434
Wash., Ore., Ida., Utah, Cal.	116,956	35,788,536	80,040	24,492,240	36,916	11,296,296
Ind., Ill., Iowa, Ky., Tenn.	165,945	50,779,170	98,601	30,171,906	67,344	20,607,264
Wis., Mich., Ohio, Pa., Va., Md...	129,267	39,555,702	56,700	17,350,200	72,567	22,205,502
N.C., S.C., Ga., W. Va., others ...	37,989	11,624,634	4,562	1,395,972	33,427	10,228,662
Totals	1,137,119	347,958,414	746,250	228,352,500	390,869	119,605,914

*Includes those mills reporting flour production data to the Bureau of the Census in November, 1943. Daily capacity is per 24-hour day. Annual capacity is per 306-day year. (U. S. 1943 Nov. and 1943 average monthly capacities were about equal.)

TABLE B—U. S. WHEAT FLOUR PRODUCTION OF REPORTING MILLS FROM CENSUS (EXCEPT GRANULAR FLOUR)—Calendar Years

(Thousands of Sacks)

Regions	1939	1940	1941	1942	1943*
Kans., Neb., Colo.....	39,584	38,528	40,260	40,889	46,193
Texas, Okla.	20,950	22,199	21,148	21,815	23,248
Missouri	19,116	17,177	17,905	18,853	19,876
Minn., N. D., Mont.....	28,091	26,287	26,723	28,965	33,518
New York	24,874	24,782	26,589	26,344	27,999
Wash., Ore., Ida., Utah, Cal.....	24,912	24,092	24,337	24,316	26,854
Ind., Ill., Iowa, Ky., Tenn.....	26,921	26,164	26,736	26,285	26,907
Wis., Mich., Ohio, Pa., Va., Md..	17,663	18,379	19,606	20,652	20,635
N.C., S.C., Ga., W. Va., Others	4,422	4,259	4,439	4,796	4,541
Totals	206,533	201,868	207,744	212,919†	229,775

*Exclusive of granular flour equivalent to 8,740,088 bbls of capacity required to produce regular flour. †Granular flour production not reported in 1942, probably required about 400,000 bbls of regular flour capacity.

TABLE B-1—INFLUENCE OF CHANGE IN SIZE AND NUMBER OF MILLS ON FLOUR PRODUCTION[1] Regular Flour Productions (Million Bbls)

Daily Capacity	1938	1939	1940	1941	1942	1943	1944	Regular and Granular Flour[2] 1943	1944
800 bbls and under.....	21.1	21.6	20.8	21.1	20.4	19.0	18.6	..[3]	..[3]
801 to 900 bbls.....	1.9	2.1	1.9	1.4	1.7	2.5	..[3]	..[3]	..[3]
901 to 1,000 bbls.....	4.2	5.0	5.6	5.9	5.6	6.1	..[3]	..[3]	..[3]
"Small" mills[4]	27.2	28.7	28.3	28.4	27.8	27.6	..[3]	..[3]	..[3]
"Large" mills[5]	75.4	76.6	74.7	77.6	80.8	89.6	..[3]	..[3]	..[3]
Reporting mills	102.6	105.3	103.0	106.0	108.6[6]	117.2	120.6	125.9	130.4

NUMBER OF MILLS (Monthly Average)[7]

800 bbls and under.....	922	872	885	901	892	821	800
801 to 900 bbls.....	13	12	11	10	11	13	..[3]
900 to 1,000 bbls.....	27	28	30	31	30	29	..[3]
"Small" mills[4]	962	912	926	942	933	863	..[3]
"Large" mills[5]	158	156	156	154	152	153	..[3]
Reporting mills.....	1,120	1,068	1,082	1,096	1,085	1,016	997
800 bbls and under.....	194	181	179	174	171	162	159
801 to 900 bbls	11	11	9	9	10	11	..[3]
901 to 1,000 bbls	26	27	30	30	29	29	..[3]

DAILY CAPACITY (Thousand Barrels)[7]

"Small" mills[4]	231	219	218	213	211	202	..[3]
"Large" mills[5]	383	371	373	367	367	378	..[3]
All mills	614	590	591	580	578	580	582

[1]Monthly reporting mills. [2]Regular flour production plus regular flour capacity required to grind the granular flour produced. [3]Data not available by these groups. [4]1,000 bbls and under. [5]Over 1,000 bbls. [6]See Table B, footnote 5. [7]Change in number and capacity is often unrelated.

TABLE D

PERCENTAGE OF CAPACITY OPERATED—MILLS REPORTING MONTHLY*

(Exclusive of granular flour)

Daily Rated Capacity	1939	1940	1941	1942	1943	1944
50 bbls and under.....	26.4	25.3	23.9	22.1	...	16.5†
51 to 99 bbls.....	28.0	25.5	26.9	24.9	...	18.0†
100 bbls	24.6	24.4	28.2	26.8	...	20.0†
101 to 200 bbls.....	30.7	28.5	29.2	26.7	...	20.5†
Under 100 bbls.....	27.4	25.4	25.5	23.6	22.0†	18.3†
200 bbls and under.....	28.5	26.8	27.8	25.6	23.4	20.4
201 to 300 bbls.....	34.3	30.3	31.4	30.0	30.7	...
301 to 400 bbls.....	40.5	41.9	41.4	41.7	40.4	...
201 to 400 bbls.....	37.1	35.9	35.9	35.0	34.9	32.7
400 bbls and under.....	32.0	30.4	30.9	29.1	27.9	25.2
401 to 500 bbls.....	46.7	44.6	46.1	46.8	47.2	...
501 to 600 bbls.....	42.6	46.7	50.2	48.6	50.7	...
401 to 600 bbls.....	45.3	45.4	47.7	47.5	48.6	48.9
600 bbls and under.....	36.3	35.2	36.4	35.2	34.8	33.0
601 to 700 bbls.....	48.1	48.6	49.4	51.5	55.9	...
701 to 800 bbls.....	52.0	53.2	60.4	59.7	52.8	...
601 to 800 bbls.....	50.0	51.0	55.0	55.8	54.5	57.9
801 to 900 bbls.....	64.3	63.5	54.8‡	58.2	72.4	...
901 to 1,000 bbls.....	59.8	61.1	62.7	62.5	69.3	...
Over 1,000 bbls	67.5	65.4	69.1	71.9	77.4	...
Over 800 bbls.....	66.9	65.1	68.3	70.9	76.7	78.8
Over 1,200 bbls	...	...	...	...	...	80.4

*Missing figures in 1943 and 1944 are not available. †Not available. Estimated. ‡It appears that there may be an error in the census data for this group in 1941. Other groups except that for under 50 bbls show an increase over 1940.

TABLE D-1

PERCENTAGE OF FLOUR PRODUCTION BY NUMBER AND SIZE OF MILLS

(Specified calendar years—exclusive of granular flour)

Daily Capacity	1938	1941	1942	1943	1944
Small Mills—					
200 bbls and under—number.....	623	646	644	584	566
Production percentage	4.9	4.7	4.2	3.3	2.7
400 bbls and under—number.....	772	769	760	695	674
Production percentage	9.3	8.6	7.7	6.4	5.4
600 bbls and under—number.....	873	859	849	780	753
Production percentage	15.7	15.1	13.8	12.0	10.1
800 bbls and under—number.....	922	901	892	821	798
Production percentage	20.5	19.9	18.8	16.2	14.8
1,000 bbls and under—number.....	962	942	933	863	...*
Production percentage	26.5	26.8	25.6	23.6	...*
Large Mills—					
Over 1,000 bbls—number.....	158	154	152	153	...*
Production percentage	73.5	73.2	74.4	76.4	...*
All Mills—					
Number	1,120	1,096	1,085	1,016	994
Production percentage	100	100	100	100	100

*Breakdown is now available only at different capacity levels than those given formerly.

TABLE W—CANADA—

ANNUAL CAPACITIES OF WHEAT FLOUR MILLS AND SUGGESTED MAXIMA

By Regions—In Barrels

Western Canada‡	1942 Annual Capacity*	Suggested Annual Capacities† Maximum Per cent of annual	Maximum Amount	Practical Maximum Per cent of annual	Practical Maximum Amount
Large mills	6,196,500	94.0	5,824,710	90.9	5,576,850
Small mills	4,415,580	65.0	2,870,127	53.0	2,340,257
Totals	10,612,080	81.9	8,694,837	74.6	7,917,107
Eastern Canada					
Large mills	18,635,400	94.0	17,517,276	90.0	16,771,860
Small mills	6,721,290	65.0	4,368,838	53.0	3,562,284
Totals	25,356,690	86.3	21,886,114	80.2	20,334,144
All Canada					
Large mills	24,831,900	94.0	23,341,986	90.9	22,348,710
Small mills	11,136,870	65.0	7,238,965	53.0	5,902,541
Totals	35,968,770	85.0	30,580,931	78.5	28,251,251§

*24-hour daily capacity for 306 days. †Suggested capacities are percentages of an assumed 24-hour day for 306 days. ‡Includes Saskatchewan and West. §1943 production was 24,475,000 bbls and the preliminary figure for 1944 is 24,292,000 bbls.

TABLE Y

Wheat Ground—Offal Production

	Flour produced 1,000 bbls	Offal produced 1,000 tons	Offal per bbl[1] lbs	Estimated wheat ground 1,000 bus
1939—Biennial census				
In the industry	110,537	4,441.1	80.355	....
Reported monthly	105,374	4,246.7	80.603	....
Not reported monthly	5,163	194.4	75.294[2]	....
Outside the industry	832	58.8	141.433	....
Total biennial census	111,369	4,499.9	80.811	....
Too small to report[3]	800	29.2	73.000[2]	....
Grand total (regular flour)	112,169	4,529.1	80.755	....
1944—Estimated (except "reported monthly" and "granular flour")				
Biennial census:				
In the industry	125,447	4,899.3	78.110	570.5
Reported monthly	120,597	4,721.8	78.308	548.2
Not reported monthly	4,850	177.5	73.200[5]	22.3
Outside the industry	1,100	74.2	135.000[5]	6.2
Total biennial census	126,547	4,973.5[4]	78.498	576.7
Too small to report[3]	450	16.2	72.000[5]	2.0
Grand total (regular flour)	126,997	4,989.7	78.605	578.7
(Granular flour)	9,738	383.9	78.846	44.6
(Regular and granular flour).....		5,373.6		623.4

[1]From flour and offal data in pounds.
[2]Lower yield of offal due to the higher percentage of total flour production as whole wheat flour.
[3]An approximation for flour. See Table X.
[4]Corresponds to 5,091,402 tons by Bureau of the Census. See reference in footnote[2], Table X.
[5]Estimated.

TABLE X

REGULAR FLOUR PRODUCTION IN ALL TYPES OF MILLS

(1,000 barrels)

	Regular flour production 1939	Estimated 1944
Mills reporting in some type of survey[1]:		
Outside the industry	832	1,100[2]
In the industry:		
Identical mills	102,331[3]	119,635[3]
Nonidentical mills:		
Reported monthly	...	961[3]
Not reported monthly	...	4,850[2]
Total nonidentical	8,206[4]	(5,811)[3]
Total in the industry	110,537[4]	125,447
Total in and outside the industry.....	111,369	126,547[6]
Too small to report in any type of survey in 1939.....	800[2]	(650)[7]
But not too small in 1944	...	(200)[2 8]
Too small in 1944	...	450[2]
Grand total production	112,169	126,997
Total biennial census	111,369	126,547
Total monthly census	105,374	120,597
Difference	5,995	5,950
Total monthly census in excess of amounts for identical mills	3,043	961

[1]Monthly census or biennial census of manufacturers.
[2]Approximation based on study. See text and tables on operating rates. For method used by Bureau of Census to expand monthly figures see: Wheat Ground and Wheat-Milling Products, Summary 1944, April 16, 1945.
[3]Reported. See reference in Footnote[2].
[4]The capacity of a few of these mills has been occupied in 1944 by the production of granular flour.
[5]Items in parentheses are not included in the totals.
[6]Compares with 130,208,223 estimated by Bureau of Census.
[7]Production by mills still in operation in 1944 which produced 800,000 bbls in 1939. Long time trend adjusted. See Food Research Institute: Wheat Studies, Vol. 12, p. 289, April, 1936.
[8]Included in the 4,850 item.

(Continued on page 26.)

Stuffed Straights

FROM THE MANAGING EDITOR'S SIFTER

By Carroll K. Michener

HOME BAKED BREAD OF HALF A CENTURY AGO. — Writing for The Northwestern Miller about war bread, at the close of World War I, Dr. Alonzo E. Taylor, former director of the Food Research Institute of Stanford University and since 1936 director of research for General Mills, Inc., makes a statement that will shock the sentimentalist who mourns that the bread of today isn't what it was in the days of mother and grandma. He says:

"The average quality of home baked bread in the United States 30 years ago was little less than disgraceful, particularly in the country districts, and such bread could not have been marketed in Europe, even to the poorer classes. With the extraordinary development of the technic of baking in this country, together with the continuously widening facilities of marketing bread, home baking has receded more year by year, and with this recession the average quality of bread in America improves yearly. Naturally, the worst home made bread was given up first. The people who still cling to home made bread by preference do so largely from one of two considerations: either their bread is unusually good, or they believe that home made bread is more healthful than baker's bread, the last of course a superstition. For the most part, home baking in this country is done outside the range of delivery route of baker's bread. In part, the American baker guides public taste for bread. He not merely meets the taste, but actually develops it year by year, and not always in the best direction. In the course of a few years we may expect that home baking will disappear, just as it has disappeared in European countries. The automobile will seal its fate. When that time arrives, we shall probably have developed several distinct types of American bread, just as the different European countries have long possessed typical breads, adapted to the climates of different areas."

Maybe it isn't fair to confront a prophet with his prophecies. Dr. Taylor's erudition is so vast, however, as to put a heavy burden of proof even upon time and events. He was, by the way, intimately concerned with the feeding of postwar Europe after the last war. Under his direction food conditions were investigated and the needs assessed. In Jan., 1919, Herbert Hoover cabled the findings of his group to the War Food Administration, indicating that meats, fats and milk were so short in many regions that the health of the people was very much impaired, mortality among children was appalling, and there was a constant menace of "the spread of Bolshevism." Crops were far below normal, and the surplus was rapidly being exhausted, so that in many districts, if starvation was not already at hand, it was only a short time ahead.

● **The statistical story** of American aid to Europe following World War I involves some fairly large figures. Between Nov., 1914, and Aug., 1919, the Commission for Relief in Belgium distributed food valued at $861,340,244.21; from April, 1917, to June, 1919, the U. S. Food Administration delivered food valued at $3,050,496,599.23; between Nov., 1918, and Aug., 1919, the Armistice Period, the director general of relief for the Allied Economic Council spent $1,101,486,783.34; and in the so-called reconstruction period, ending in July, 1923, food distribution cost $220,704,581.78. This adds up to a grand total of $5,234,028,208.56, of which $325,829,202.38 was made up of private and public donations, more than half going to Belgium. The major part of it was from American pocketbooks. Biggest item — $4,463,485,503.46—was credit, mostly extended by the U. S. government. More than 33,841,307 tons of commodities, mostly American foodstuffs, were delivered to the people of 23 European countries, of which flour constituted 7,336,780 and grain 14,767,113 tons. Total populations of relieved countries, 230,486,000; number of children fed in postwar period, 10,000,000. Number of Americans devoting their entire time to war relief work, largely without remuneration, more than 500,000.

● **Getting back to Dr. Taylor** and the bread of Europe as he found it following World War I: "The roll of Vienna, the large square loaf of Italy, the long bread of France, the semmel of Germany, the flat bread of Scandinavia and the square bread of England are practically what they were ten or thirty years ago, and the methods used in their manufacture have undergone few changes. There is, of course, in each European country a certain clientele, largely in hotels, for whom some attempt is made to adapt the bread to particular tastes. But for the most part the bread is quite the same, and one reason lies in the fact that the practices of fermentation have not been materially varied."

These reflections upon contrasts between the bread of Europe and that of America have a pertinence to our perpetual quarreling over what kind of bread to eat and why:

"The characteristics in a bread desired by the consumer depend to a considerable extent upon whether bread is eaten with or without spreading materials. Every American who has traveled abroad knows that dry bread is an article to be relished in most countries of Europe. It has a good crust, the texture invites to mastication, and there is a tasteful wheaten substance to the bread that makes it acceptable without spreading materials. This is not true of most American breads. They do not lend themselves to being eaten dry. The American demands butter on his dinner table, not merely because he likes butter but because without it the bread is not relished. This same American abroad accepts the European habit of butterless bread at dinner, because the bread is acceptable without butter. Other uses of bread illustrate the same thing. It is common with the poorer classes in Europe north of the latitude of the Alps to soak dry bread in coffee. It is equally common south of the latitude of the Alps to soak dry bread in wine. The bread of the United States does not lend itself to consumption in the same manner. Whenever the type of bread in a European country changes and loses its satisfying quality, the public reacts by demanding spreading materials.

"One further point is to be noted. The larger the fraction of bread in the diet, the more insistent is the consumer on substantive qualities rather than on appearance and superficial attributes. Before the war, bread constituted 50% of the French diet, bread and pastes over 60% of the Italian diet. Now, without seeming to be facetious, it may be fairly contended that the average bread of the United States before the war was not satisfying enough to form 50% of the diet. When bread forms half or more of the diet, it must be continuously good and satisfying, and then the public taste is not fickle. If it forms only one fourth of the diet, then the qualities are less important and public taste may flit from bread to bread."

● ● ●

In 1830, by hand labor, it required 64 hours and 15 minutes to produce an acre of wheat. Today, using tractor-powered machinery and hauling by motor truck, it requires only two hours and 24 minutes. The difference is 61 hours and 51 minutes, which now can be used (or could before the war) in making radios and automobiles, building machine tools and factories, producing movies or going to the ball game. Or even in making whoopee or playing boogie-woogie.

Flour Production

(Continued from page 25.)

TABLE E

A Suggested Schedule of Flour Mill Operations by Regions to Attain an Annual Production of About 137,200,000 Barrels*

Region	1943 Annual Capacity	Percent of capacity required	"Practical Maximum" Production Thou. bbls	Wheat required Thou. bu.†
1	32,070	84.7	27,173	123,637
2	17,922	77.5	13,890	63,199
3	15,191	78.1	11,865	53,986
4	24,252	81.5	19,764	89,926
5	17,815	91.6	16,319	74,251
6	18,259	86.3	15,758	71,699
7	25,908	64.3	16,666	75,830
8	20,182	63.6	12,835	58,399
9	5,931	50.5	2,995	13,627
U. S.	177,530	77.3	137,265	624,554

*Based on approximately uniform increase over 1944 operations.

†Wheat required at the rate of 273.0 lbs or 4.55 bus per bbl of flour; 272.1 lbs were required in 1943 and 272.8 in 1944.

TABLE B-2
FLOUR PRODUCTION BY COMBINATION OF CERTAIN REGIONS

(Exclusive of granular flour)

	Regions 1 to 6* Production 1,000 bbls	Percent of 1943 capacity	Regions 7 to 9* Production 1,000 bbls	Percent of 1943 capacity	All Regions Production Percent of 1943 capacity
1941..	80,083	63.8	25,909	49.8	59.8
1942..	82,237	65.5	26,395	50.7	61.4
1943..	90,657	72.2	26,575	51.1	65.7
1944..	93,861	74.8‡	26,736	51.4†	67.7

*Regions and data from Table B.

†Increase compared with 1941 or 1942 in these regions is very slight, probably because of the high percentage of "small" mills. "Small" mills have 52% of the capacity in Regions 7 to 9 compared to 27% in Regions 1 to 6.

‡The "large" mills in Regions 1 to 6 have 78.6% of the total U. S. "large" mill capacity.

TABLE C
RATE OF OPERATION OF REPORTING FLOUR MILLS EXPRESSED AS PERCENTAGE OF ANNUAL CAPACITY

Showing Seasonal Factor[1]

	1938	1941	1942	1943	Exclusive of granular flour 1944
"Large" Mills[2]					
Jan.	62.1	67.1	73.9	87.2	92.5
Feb.	62.9	70.4	74.8	83.1	85.2
March	61.2	66.9	65.3	78.8	76.4
April	57.6	68.7	62.4	69.5	73.2
May	59.0	65.7	64.0	64.0	72.0
June	62.6	68.2	64.0	65.1	71.8
July	64.2	68.6	71.2	68.8	...
Aug.	64.7	65.6	70.3	72.7	...
Sept.	74.3	76.8	79.8	80.7	...
Oct.	70.9	72.3	78.7	82.8	...
Nov.	68.8	68.3	80.3	86.5	...
Dec.	63.3	71.3	79.1	84.5	...
Wght. Avg.	64.3	69.1	71.9	77.4	80.7
"Small" Mills[4]					
Jan.	36.7	42.4	45.6	49.9	52.5
Feb.	36.9	42.8	44.5	47.6	50.0
March	35.4	42.5	39.0	46.5	42.1
April	33.9	43.6	38.1	40.9	40.0
May	35.0	41.3	38.3	35.2	40.3
June	36.1	43.1	39.7	37.2	39.1
July	39.7	43.4	41.7	39.7	...
Aug.	38.4	42.7	40.8	41.9	...
Sept.	44.5	47.0	46.9	47.4	...
Oct.	43.1	45.0	47.4	48.9	...
Nov.	43.1	44.6	48.2	50.0	...
Dec.	38.7	45.0	47.9	48.5	...
Wght. Avg.	38.4	43.6	43.1	45.5	45.2
All Mills					
Jan.-Dec.	54.6	59.8	61.4	65.6[7]	67.7[7]

[1]From Census Bureau data.

[2]Over 1,000 bbls daily capacity.

[3]Granular flour production not reported previous to Jan., 1943.

[4]1,000 bbls or less daily capacity.

[5]January to June 78.2 in 1944 and 75.5 in 1943.

[6]Estimated. See text. July to December not available by these sized groups.

[7]Including granular flour: 70.0 in 1943 and 73.1 in 1944.

TABLE D-2
IRREGULAR SEASONAL CHANGE IN NUMBER AND IN CAPACITY OF MILLS

	1938 No. of Mills	1938 Daily Capacity (1,000 bbls)	1940 No. of Mills	1940 Daily Capacity (1,000 bbls)
Jan.	1,103	618	1,045	590
Feb.	1,100	619	1,080	593
March	1,099	618	1,085	592
April	1,097	618	1,089	592
May	1,149	620	1,089	592
June	1,145	619	1,090	594
July	1,140	618	1,114	595
Aug.	1,140	619	1,084	591
Sept.	1,135	616	1,081	591
Oct.	1,121	612	1,079	590
Nov.	1,102	597	1,076	591
Dec.	1,109	599	1,074	587
Avg.	1,120	615	1,082	591
	1941 No. of Mills	1941 Daily Capacity (1,000 bbls)	1942 No. of Mills	1942 Daily Capacity (1,000 bbls)
Jan.	1,085	584	1,092	577
Feb.	1,097	582	1,092	573
March	1,100	582	1,093	575
April	1,100	582	1,093	575
May	1,106	582	1,093	575
June	1,104	580	1,091	575
July	1,099	578	1,085	575
Aug.	1,097	578	1,082	577
Sept.	1,093	577	1,080	577
Oct.	1,090	577	1,076	577
Nov.	1,090	574	1,073	579
Dec.	1,095	578	1,068	577
Avg.	1,096	580	1,085	576
	1943 No. of Mills	1943 Daily Capacity (1,000 bbls)	1944 No. of Mills	1944 Daily Capacity (1,000 bbls)
Jan.	1,061	575	981	579
Feb.	1,048	576	981	580
March	1,029	580	977	580
April	1,026	581	975	582
May	1,022	582	975	582
June	1,018	582	975	583
July	1,013	578	1,002	584
Aug.	1,001	582	1,006	584
Sept.	998	581	1,010	584
Oct.	995	580	1,014	584
Nov.	994	580	1,015	583
Dec.	994	581	1,020	584
Avg.	1,016	580	994	582

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Grain Inspection

(Continued from page 6.)

exactly alike, and some were widely different.

Early Bills in Congress

A national system of grain inspection was first proposed in the Congress in 1892. Two bills were introduced in the Senate that were to provide for the federal classification and grading of grain. One of the bills passed the Senate, but failed of passage in the House. Secretary of Agriculture Rusk, in his annual report for that year, said, "Another matter which is the subject of legislation now pending is that of national standards for grain. There is evidence in the correspondence of the department of a steadily growing feeling in favor of the establishment of such a national standard which will relieve the grower from the annoyance inseparable from the existence of several standards varying in the several grain markets of the country. Unquestionably some system of national inspection and grading under the control of the Secretary of Agriculture should be established and would be without doubt in a very short time accepted and recognized in all the great market centers of the United States."

The next year Senator Casey, of North Dakota, introduced a bill for federal grain inspection. In 1902 Senator McCumber introduced a bill for national grain inspection and grading. President Theodore Roosevelt, in his annual message to Congress in 1907, said:

"The grain producing industry of the country, one of the most important in the United States, deserves a special consideration at the hands of Congress. Our grain is sold almost exclusively by grades. To secure satisfactory results in our home markets and to facilitate our trade abroad, these grades should approximate the highest degree of uniformity and certainty. The present diverse methods of inspection and grading throughout the country under different laws and boards result in confusion and lack of uniformity, destroying that confidence which is necessary for healthful trade. Complaints against the present methods have continued for years, and they are growing in volume and intensity, not only in this country but abroad. I therefore suggest to the Congress the advisability of a national system of inspection and grading of grain entering into interstate commerce as a remedy for the present evil."

Grain Dealers' National Grades

Thirty years ago newspapers contained many comments on the subject of grain inspection. I quote the following written by R. Lewis, of the Red River National Bank at Fargo, N. D: "Under the present system the farmers are being robbed everywhere of at least one grade on their wheat, and in this way: 'In the fall of the year when they have to market their grain the inspection is very rigid, and for the last two years it has been impossible to send a better grade than No. 2 or No. 3 northern, and usually at a pretty heavy dockage. As soon as the grain is out of the farmers' hands this damnable inspection loosens up on the grades and the elevator people who have graded the grain No. 2 and No. 3 northern are allowed to deliver this wheat for No. 1 northern on contract sales.'"

I quote these comments not to

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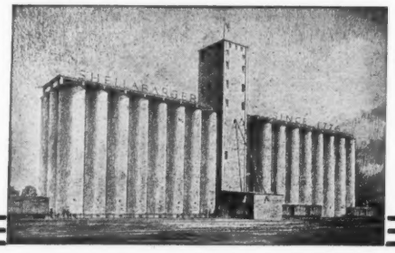

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Milled Under Laboratory Control
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SHERIDAN, WYOMING

CORN — BOTH WHITE AND YELLOW
Eberhardt & Simpson Grain Company
Milling Wheat SALINA, KANSAS *Feed Grains*

thresh over old straw, but to indicate what did happen when we did not have a national grain inspection system. The Chief Inspectors National Association was formed in 1902 and recommended a set of grades which was generally adopted. In 1906, a call was issued by the Grain Dealers National Association for a meeting of delegates from the prominent grain exchanges for the purpose of establishing uniform grades. Forty-three delegates attended at Chicago. The convention found its work difficult, but a plan was worked out to be submitted to the various exchanges. The moisture test was recommended in order to make grading more of an exact science and less a matter of guesswork.

A second convention was held in June, 1907, and the grain dealers' uniform grades were generally adopted by all grain exchanges. However, the hope for uniformity between markets did not materialize, because there was no central authority to settle disputes between the various inspection departments.

Federal Legislation

More grain inspection bills were introduced in Congress. Most of these bills provided for out and out federal inspection of grain, and all failed of passage. Finally, in 1916, after 14 years of legislative consideration, Congress passed the Grain Standards Act, under which we have operated for the past 29 years. The act provides for the federal supervision of grain inspection. This act was amended once, in 1940, by adding the word "soybeans" to the grains authorized under the act.

The United States Department of Agriculture has 37 district offices to supervise grain inspection. These district offices are in turn serviced by co-ordinating field headquarters offices at Chicago and at Portland, Oregon. When the act was first passed there were 64 points in the United States where grain inspectors were located. At the present time, grain inspectors are located at 144 points, and the inspection service is available in 33 states. Last year nearly 2,000,000 inspections were made. Supervision and appeal services are easily obtained so that there is no reason why anyone should be injured by an incorrect grade.

Those who framed the Grain Standards Act wrote nothing in it about co-operation between the federal department, the grain inspection departments, the state colleges, and the trade. It would have been difficult to do so. However, the act implies co-operation and co-ordination on the part of all of us. The act does not provide for a federal inspection of

(Continued on page 40.)

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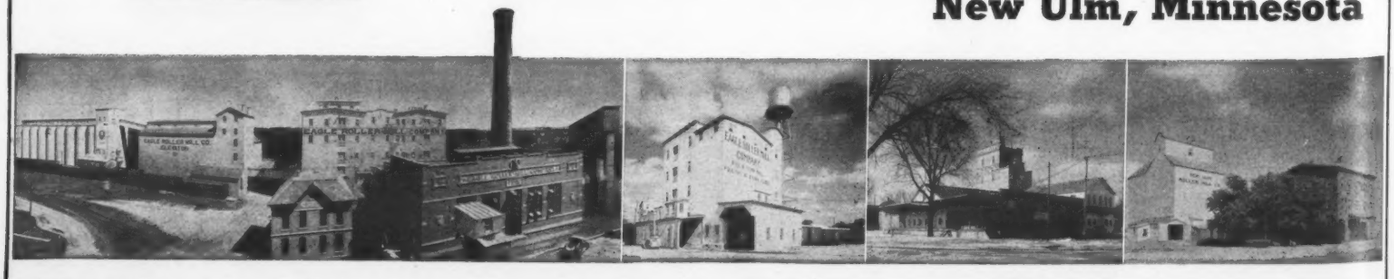

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AMBER DURUM WHEAT
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Quality Millers *for* Over Half a Century
Domestic and Export DOVER, OHIO

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MILLERS OF
High Grade Soft Winter Wheat Flour
Plain and Selfrising
LIGONIER, IND. NORFOLK, VA.

Aug. 15 Set for Rye Hearing; General Foods Denies Corner

Washington, D. C.—Secretary of Agriculture Clinton P. Anderson announced last week that a public hearing will be held in Chicago on Aug. 15 to determine whether lower limits should be established on speculative transactions in rye futures. The hearing will be held under authority of the Commodity Exchange Act.

Secretary Anderson stated that recent conditions in the rye market necessitated reconsideration of the trading limit on that grain. On Dec. 22, 1938, a limit of 2,000,000 bus for daily trading and market positions in any one grain by a speculative trader was established by the Commodity Exchange Commission. Price ceilings and other wartime controls have discouraged speculation in most grains. Speculative interest has centered in the rye market.

The recent volume of futures trading in rye has been at a level of nearly 4,000,000,000 bus per year, against an average annual volume prior to 1942 of only slightly over 300,000,000 bus. The secretary pointed out that this "inordinate" activity was in a grain of which less than 26,000,000 bus were produced in the United States in the last crop year. He stated that apparently the earlier volume of trading, which was only one thirteenth of the current volume, had been sufficient to satisfy all legitimate hedging needs.

Referring to other measures taken by the Department of Agriculture to curb current rye speculation, Secretary Anderson mentioned the suggestions made to the Chicago Board of Trade by the Commodity Exchange Authority on June 27 that the exchange itself establish lower speculative limits and fix higher margins. He stated that the action taken by the exchange fell materially short of that suggestion, in that the exchange on July 2 established a position limit of 700,000 bus and a daily trading limit of 1,000,000 bus, while the suggestion of the Commodity Exchange Authority was a 500,000-bu limit each. He also pointed out that a margin requirement of 33⅓% for initial deposit with a 20% maintenance requirement had been suggested, which would amount to approximately 50c bu initial margin and 30c bu maintenance margin, while the exchange had established an initial margin of only 25c bu and a maintenance margin of 15c bu, or about one half of that suggested.

General Foods Corp., the Daniel F. Rice Co., and four individuals, all members of the Chicago Board of Trade, have entered general denials they cornered the rye market in Chicago as charged by the War Food Administration.

The complaint alleges the respondents manipulated the price of rye and rye futures from December, 1942, to May, 1944, and cornered the rye market in Chicago in May, 1944.

"No corner ever existed in May, 1944, rye futures on the Chicago Board of Trade or in actual rye in Chicago," General Foods said in its answer.

"General Foods never attempted, either alone or with others, anywhere or at any time to corner either the rye futures or actual rye, and never manipulated or attempted to manipulate the price of either."

Similar answers were filed by Charles W. Metcalf, executive vice president of General Foods, the Daniel F. Rice Co., Daniel F. Rice, Lawrence J. Ryan, and Philip R. O'Brien.

In requesting that the complaint be dismissed, the Daniel F. Rice Co. said it was issued by Ashley Sellers, then assistant War Food Administrator, and that he had no power to issue it.

Harvesting and Movement of Wheat Well Ahead of Last Year in Kansas

Great Bend, Kansas.—E. H. Leker, assistant state labor supervisor for Kansas, estimates that from 90 to 95% of the state's wheat crop had been harvested up to the close of July, as compared with 85 to 90% up to that time a year ago. The state field labor office here has been closed.

In connection with this year's harvest, reports from Topeka indicate that while wheat production is larger than a year ago, the transportation situation is much better. A year ago at the close of July, more than half of the 2,400 elevators in the state were closed because lack of cars prevented emptying of bins. This year, the four big wheat carrying roads reported only 50 elevators were closed.

Some wheat has been piled on the ground, on farms and near elevators, but reports show the amount is far under a year ago and not anywhere as much as had been feared earlier in the season. One reason is that the local elevators largely had been emptied of their accumulation of old grain before the present movement began, as had storage bins on the farms. Then the railroads and government transportation officials cooperated in getting empty cars into the state. As a result, although no one knows exactly, it is estimated less than 10% of the present crop is being stored temporarily on the ground.

The fact the harvest continued longer than in previous years has been a contributing factor. The long harvest period permitted the spreading out of labor and machinery needs and gave the railroads more time to handle the crop.

Movement of empty boxcars eastward from the Pacific coast has been very helpful. These are cars which have gone westward filled with war supplies, and then have come back empty to Kansas. They have been loaded with wheat and sent on to eastern mills and terminal elevators. About 1,000 cars a day are coming into the state under this system and have been for two weeks, it is said.

—BREAD IS THE STAFF OF LIFE—

DICKINSON CO. ELEVATOR SOLD TO ARCHER-DANIELS

Minneapolis, Minn.—The Archer-Daniels-Midland Co., Minneapolis, has purchased the Twin City elevator of the Albert Dickinson Co. This is one of the most modern terminals in the Minneapolis area, with concrete storage a little in excess of 2,000,000 bus.

Since 1882
BUY & SELL BY GRADE

DURUM COMMITTEE—J. E. Skidmore, president of the General Mills central division with headquarters in Chicago, has been appointed to another term as a member of the durum committee of the Millers National Federation. Mr. Skidmore, who was advanced to the presidency of the central division last October, has been with General Mills and its predecessor companies since 1922.

PILLSBURY PROMOTION—G. Robert Peterson has been appointed assistant general sales manager of the feed mills division of Pillsbury Mills, Inc. The announcement was made by Clyde H. Hendrix, vice president, feed mills division. Mr. Peterson has been with the Pillsbury feed mills division since 1942, and has had charge of sales in the Clinton division for the past two years.

RETIRES—Fred J. Lingham, Federal Mills, Inc., Lockport, N. Y., recently retired as chairman of the flour ceiling and subsidy committee of the Millers National Federation, a position he has held for the past two years. During the 30 years he has been a member of the Federation Mr. Lingham has worked for many of the committees. C. D. McKenzie, president of the Federation, has succeeded Mr. Lingham as chairman.

SALES EDUCATION—Phil I. Welk has been renamed to serve on the sales education committee of the Millers National Federation for the coming year. Mr. Welk is general manager of the Preston-Shaffer Milling Co., Walla Walla, Wash. The sales education committee is one of the newest Federation committees, and is under the chairmanship of W. R. Heegaard, Russell-Miller Milling Co., Minneapolis.

MOSTLY PERSONAL

Leslie R. Olsen has resigned his civilian appointment as special assistant in the subsistence section, research and development branch, military planning division, Office of Quartermaster General, Washington. Mr. Olsen was former director of products control for the International Milling Co., Minneapolis. He and Mrs. Olsen are planning to make their home in California, and are visiting friends in Minneapolis en route.

●

Joseph Freschi, president of the Mound City Macaroni Co., St. Louis, is vacationing at a northern Minnesota lake.

●

The Standard Milling Co., through **L. A. Mackenroth,** vice president, announces the appointment of **John H. Meister** of Cedar Rapids as the company's representative in Iowa. Mr. Meister has for many years been associated with the Corn Products Refining Co., and has a wide acquaintanceship among bakers. He will continue to make his headquarters in Cedar Rapids.

●

James F. Bell, chairman of the board, and **Gordon C. Ballhorn,** comptroller, General Mills, Inc., Minneapolis, were recent visitors at the mill's New York offices.

●

Philip H. Postel, president of the Ph. H. Postel Milling Co., Mascoutah, Ill., was in Chicago last week.

●

George H. Strietmann, vice president and general manager of the Strietmann Biscuit Co., Cincinnati, has been named a director of the United Biscuit Co. of America. He was elected to the board at a recent meeting in Chicago. The United firm operates 17 plants throughout the country.

●

J. G. Schmitz, Oklahoma City, general sales manager and vice president of the southwestern division of General Mills, Inc., accompanied by his family, is at Lake Murray, Ardmore, Okla., on a fishing trip.

●

Cohen Williams, Nashville flour and feed brokerage, left Nashville Aug. 2 by plane for Oakland, Cal., where he will visit his son, **BM 2/c Joe D. Williams** of the United States Coast Guard, stationed at Alameda, Cal., and Mrs. Williams. Mr. Williams made the trip specially to see his new grandson, Cohen Euen II, and namesake.

●

Dr. W. H. Strowd, secretary of the National Soft Wheat Millers Association, Nashville, has returned from Chicago, where he attended a conference of the executive committee of the American Small Business Men's Association.

●

Resignation of **Daniel P. Woolley** as regional administrator of the New York Office of Price Administration has been accepted by Chester Bowles, OPA administrator. Mr. Woolley held this position since Nov. 15, 1943, and his resignation follows a series of internal difficulties at the New York office. Mr. Woolley was formerly vice president of Standard Brands, Inc., and prior to the OPA appointment was New York City Commissioner of Markets. Lee C. Gentner, a special assistant to Mr. Bowles, is named acting administrator of the New York region which includes New York, New Jersey, Pennsylvania, Delaware, Maryland and the District of Columbia.

●

Fred N. Burrall, general sales supervisor for the William Kelly Milling Co., Hutchinson, Kansas, would be content to stay home for a while, he says, after nearly a month-long swing through eastern states. Travel accommodations and the food were the worst he has ever experienced, he reports.

●

Carl E. Bolte, president and manager of the Slater (Mo.) Mill & Elevator Co., recently was named one of five new trustees of Missouri Valley College, Marshall, Mo.

●

Herman Steen, vice president and secretary, Millers National Federation, Chicago, is in Montreal for several days this week on a business trip.

●

J. A. Powers, founder of the wholesale Powers Bakery, Des Moines, Iowa, celebrated his twenty-fifth anniversary in the baking business with an open house at his home Aug. 7. Old friends, customers and members of the bakery trade attended.

●

Harry N. Bernheimer, Philadelphia flour broker, is spending the summer at Atlantic City at the Hotel Chelsea. He will return to Philadelphia the latter part of August.

●

Clarence M. Hardenbergh, vice president, Commander-Larabee Milling Co., Minneapolis, is spending the month of August, with his family, in the White Mountain district in New Hampshire.

●

Jack P. Holt, sales manager of the soya products division of Commander-Larabee Milling Corp., is calling on the trade in the Southeast for 10 days.

Mr. and Mrs. Charles Bolte celebrated their fiftieth wedding anniversary Aug. 6, with a garden party given at their home in Slater, Mo. Mr. Bolte has been identified with the milling business all of his business career, having started with Colorado Milling & Elevator Co. in Denver, and then running a mill at Alexandria, Neb. He then became a partner and later the owner of the Slater (Mo.) Mill & Elevator Co., which was recently sold to Midland Flour Milling Co., Kansas City. He is president of the State Bank of Slater and owns several near-by farms. The couple's two sons, Carl and Harry, are officers in the Slater division of the Midland Co., and previously had been associated with their father in that business.

WITH THE ARMED SERVICES

George E. King, retired flour miller, formerly with the Red Star Milling Co., Wichita, has received word of the death of his son, **Lt. Leslie W. King,** 31, while a prisoner of the Japanese. The ship on which he was being transferred from the Philippine Islands to Japan last December was torpedoed by an American submarine. Lt. King was one of 48 Wichita officers and men who were killed or taken prisoner on Bataan and Corregidor in 1942. He was for a time assistant chemist at the Consolidated Flour Mills Co., Wichita, and later was with the International Milling Co., in the products control department, Minneapolis, whence he was called into service. He was a member of the northwestern section, American Association of Cereal Chemists.

★

Capt. Robert M. Patterson, son of **C. J. Patterson** of the C. J. Patterson Co., Kansas City, has returned home after a long tour of duty in the European theater. A crack pilot in the 437th Troop Carrier Group, 53rd Wing, the 23-year-old captain entered the service shortly after graduating from the Mexico Military Academy in 1941. He has been awarded the Distinguished Flying Medal with three oak leaf clusters, and has seven campaign stars. Many of his missions involved carrying paratroopers into combat, which is one of the more dangerous assignments in the air corps. His brother, **Lt. C. J. Patterson, Jr.,** is in the 86th Quartermaster Co., Camp Lee, Va.

★

John Cowan of the United States Naval Reserve is visiting his brother, **Claude Cowan, Jr.,** of the United States Army, who has just returned from many months in the European theater of war and their parents, **C. C. Cowan,** owner and manager of the Southland Mill & Elevator Co., Nashville flour blending plant, and Mrs. Cowan. The third brother and son, Robert, is stationed at Fort Schuyler, N. Y., with the United States Naval Reserve. John is returning to Norfolk, Va., and Claude, Jr., is to report to Camp Atterbury shortly.

★

Spencer Strowd, son of **Dr. W. H. Strowd,** Nashville, secretary of the National Soft Wheat Millers Association, and Mrs. Strowd, who has finished his basic training at Sheppard Field, Texas, has been transferred to Scott Field, Ill., for 26 weeks' training as radio mechanic and operator.

★

Hugh Cameron, Oklahoma City, son-in-law of **J. S. Hargett,** head of the southwestern division of General Mills, Inc., is back home with his family after being a prisoner of the Germans for two years. Mr. Cameron was formerly connected with the sales department of General Mills.

★

Kenneth C. Kelley, Y/2c, U. S. Coast Guard Reserve, formerly in the sales and traffic departments of Midland Flour Milling Co., has returned from the Pacific and is in Kansas City for a few days' leave while en route to a new assignment at New London, Conn.

★

Maj. Thomas Humphrey, son of **Karl E. Humphrey,** treasurer of General Mills, Inc., Minneapolis, has arrived home for a visit with his parents, after overseas service in Italy. He expects to be stationed at Fort Leavenworth, Kansas.

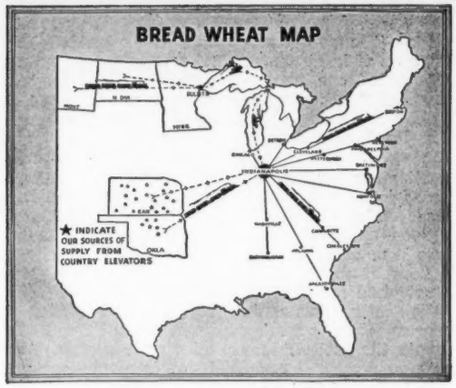
ACCOMPLISHED GOLFER—Fred H. Schindler, sales manager of the western division of Larabee Flour Mills Co., has for years been recognized among the flour gentry of the Southwest as its most accomplished golfer. Not until this year, however, did Mr. Schindler blossom out in relatively big league competition and show Kansas City that his parttime golfing was good enough to win difficult tournaments. A few weeks ago he won the city match play tournament while being the under dog in many of the last several matches. A couple of weeks later he won the championship of Indian Hills Country Club by coming from behind, shooting birdies on five of the last 10 holes, posting a 74-67, and sinking a long putt for a birdie on the last hole to win the trophy. Oddly, Mr. Schindler has been playing better golf this year than in the past despite a back injury which, like Sam Snead, keeps him encased in a heavy brace. He may add the braces to his flour line, he says, and merchandise them to those who want to improve their golf score. Those who are interested in the kind of club Mr. Schindler is wielding in this picture might drop him a line.

DEATHS

Max Rukin, 57, president of the Industrial Fumigant Co., Chicago, died recently in Minneapolis, Minn. He was born in Minsk, Russia, and came with his parents to this country when he was five years of age, and became a naturalized citizen in his youth. He was a graduate of the University of Illinois and served in World War I in a military police company.

Mrs. Ethel Marie Hill Zerega, wife of **John P. Zerega,** chairman of the board of A. Zerega's Sons, Inc., Brooklyn, manufacturers of macaroni and egg noodle products, died at her summer home in Bayport, L. I., Aug. 1. Her husband, a son and a daughter survive her.

STRATEGIC LOCATION



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Operating Kansas City Southern Elevator Kansas City, Mo.

New Crop Winter Wheat Produces Satisfactory Flour, Chemists Say

Kansas City, Mo.—The quality picture of the 1945 crop of hard winter wheat flours "is a good one, considering all factors," the Southwest Cereal Chemists Crop Reporting Committee states in its final summary that was issued Aug. 1.

"To sum up, all crops are spotted and the 1945 crop is no exception," the report stated. "Not all flour of any crop has given universal satisfaction and there is no reason to believe that all flour from the 1945 crop will give universal satisfaction. The results of the quality tests again show the importance of selecting wheats to maintain the desired flour characteristics."

The committee indicated in its report that the Aug. 1 summary would be its final report for the season. Previous reports have been in the nature of progress reports. Certain factors which the committee believed were important in the over-all picture of the crop are discussed in detail. The report follows:

"The final answer on any crop is what the baker actually finds when he starts using new crop flour. What we are doing is to report the judgment of many chemists of wide experience in the selection and blending of wheats to make a flour that will meet the requirements of commercial bakers. In order to arrive at their answer they must take into consideration the availability of the desired wheat. Careful selection of wheat is at all times and on all crops necessary, but a crop picture as a whole reflects the spread of the areas over which the desired wheats can be found.

"Protein Content.—The quantity of protein has long been an important part of flour specifications. At the beginning of harvest, the wheat was of low protein content, for the most part below 11%, and as of this date the average protein content of the daily arrivals of wheat at all markets is low. The Kansas State Grain Inspection Department reports an average of 10.94% protein on 11,930 cars inspected. This average reflects the large amount of low protein wheat which was produced but does not reflect the fact that there are available in some areas, wheats of medium protein content, 12 to 13.5%. There seems to be a considerable amount of wheats of 12 to 12.5%, some 12.5 to 13.5% and practically none above 14%. Most mills have already announced to the trade the protein content of the flour which they intend to deliver and the consensus is that the protein level maintained on this crop will approximate the levels established last year. In cases where mill mixes were maintained on a relatively high level through the 1944 crop year, due to a large carry-over of 1943 crop wheat, it is possible that the protein content will have to be reduced.

"Considerable has been said above about the quantity of protein. Quality of protein available, however, is a more important factor. Since adaptability of the flour to modern bakeshop practices depends more upon quality than quantity of protein, the following quality factors are important:

"Absorption.—We are seriously tempted to say that the absorption is much higher. To date wheats of the same protein content as last year's crop have shown the ability to hold more water without slacking off or becoming sticky during machining. While we definitely believe that these findings will be substantiated, bakery confirmation is advisable. For those who are interested in farinograph absorption figures, the absorption as determined by the farinograph is running higher than on comparable wheats of last year and this has held true for wheats from over the entire hard winter wheat region.

"Mixing Time and Tolerance to Mixing.—This is one quality factor that is influenced very little by the quantity of protein. In fact it could be that the higher protein flours would require less mixing and be less tolerant to mixing. In this one factor there is ample opportunity for considerable variation depending upon the mill location, normal source of supply and the skill used in the selection of wheat for the mill mixes. The committee feels there will not be the extremes in mixing requirements found on last year's crop. The average of the crop is very similar to the average of the 1944 crop.

"Fermentation Time and Tolerance.—Usual sponge times and percentages continue to be indicated. We find that no general adjustment of this factor has been indicated. Continue on the same basis as on the same flour from old crop wheat. If any adjustments are necessary they will be small.

"Response to Yeast Food.—Yeast food in usual amounts is required. If this has been reduced on the last part of the old crop replace the reduction when beginning to bake new crop flour. One half of 1% as a general rule produces doughs of good stability, properly chemically developed.

"Malt Requirement.—New crop flours are inherently higher in diastatic activity. Both gassing power and maltose are higher on unmalted new wheat flours. Amylograph results also indicate higher enzyme activity. Malting to the same diastatic level as last year is giving optimum results. Due to the fact that the natural level of the untreated flour is higher, less malt will be required to obtain this level. The flour is not sensitive to malt and bakers who have found it advantageous to add malt in their shop will probably continue to do so.

"Bleaching.—Most flours will require the same maturing bleach as normally used last year. In some cases where individual mills were using low levels, they have found it necessary to increase the amount used at the beginning of this crop. Flour color is brighter but is inclined to be slightly creamier than flour from the previous crop. This creamy color is somewhat difficult to completely remove by bleaching but does not manifest itself in the finished loaf.

"Machining and Make Up.—Doughs with the proper absorption, correctly developed in the mixer handle well without becoming sticky or bucky. Very little evidence of stickiness or buckiness has been found and it is very unlikely that the baker will have any trouble in this respect.

"Proof.—Doughs proof normally indicating good gas production and gas retention.

"Oven Spring.—The oven spring of the loaves has been satisfactory, resulting in very good volume and again bringing out the good gas retention quality of the gluten.

"Grain and Texture.—There has been a noticeable absence of the number of samples usually encountered which have shown poor grain and texture development. The average of all samples tested is excellent and we believe the baker will not have difficulty obtaining the desired texture and grain.

"So far in this report we have said nothing of ash. It is an important factor in flour specifications, but has only limited value as a means of determining the actual worth of a flour toward producing quality bread. Neither does it always determine the grade or degree of extraction of a flour. Attention has been called in previous reports to the production of a considerable amount of wheat of higher protein content which is of good baking quality but which produces flour of high ash. The high ash did not result from poor milling techniques but from the natural mineral content of the endosperm. Throughout the year this wheat will continue to be a factor in specification milling. However, later harvested wheats from the same areas have shown some reduction in ash and wheats of medium protein content from other areas have shown nearly normal ash results with a tendency to run higher. Selection of wheat will minimize the ash factor but it must be given important consideration when milling to rigid specifications.

"Southwestern flour, because of the presence of three undesirable varieties of wheat which have found their way into some mill mixes, has not always been entirely satisfactory. This would not be an over-all crop report if it did not recognize these wheats but at the same time we can report that these varieties can be identified by kernel characteristics which make it possible to segregate more readily these wheats than was possible in the past. Schools, attended by representatives of the milling companies of the Southwest, for the purpose of studying kernel characteristics were held during the past year. The results from these schools have been gratifying and the committee feels that flour from this crop will not reflect the quality of these undesirable varieties to the extent it did in some cases on the last crop.

"To sum up, all crops are spotted, this one is no exception. Not all flour on any crop has given universal satisfaction and there is no reason to believe that all flour on this crop will, again showing the importance of selecting wheats to maintain the desired flour characteristics. All factors considered, however, the picture is a good one.

"Commercial new crop flour is already in the hands of many bakers as mills are rapidly increasing the amount of new wheat in their blends. Members of our committee will be in close touch with the flour's reaction in bakeries and should changes from the above résumé of the crop be warranted, a new report will appear in the near future."

» »

Shellabarger Mills' Report

Salina, Kansas.—The Shellabarger Mills, Salina, in its annual preliminary report on new crop flour, this week stated that little or no formula change will be needed in the bakery. The new flour characteristics include better absorption, better gluten quality, slightly higher ash content because of milling characteristics, and a bread of good characteristics.

Absorption should be 1 to 2% higher, the report states, than was the absorption percentage on last year's flour. A cool, slack sponge should be set with a short-sponge mixing time. Mixing time will be approximately the same as with 1944 crop flour, with floor time after mixing about 30 to 35 minutes and 10 to 12 minutes before proofing.

Sponge fermentation time and proof time seem to be about the same as last year's crop. Yeast foods do not appear to be as essential as in the last crop and normal amounts are recommended.

With proper handling, the bread will be excellent, the milling company's summary stated.

—BREAD IS THE STAFF OF LIFE—

BUFFALO EXPORTS RESUMED FOLLOWING LULL

Buffalo, N. Y. — Shipments of export grain from this city, virtually halted for several days because of congestion at Atlantic seaboard ports, have been resumed and now are nearly back to normal, according to grain men. The congestion was attributed to slow unloading because of the arrival of considerable quantities of wet wheat. Grain in storage in Buffalo commercial elevators on July 30 amounted to 15,170,728 bus, against 17,607,575 bus a week previous.

July Flour Production Up

The production of flour during July showed an increase of almost 2,000,000 sacks over the output of a year ago, according to reports compiled by The Northwestern Miller. The July, 1945, output reached 15,222,857 sacks, representing 73% of the total output of the United States, compared with 13,375,409 sacks a year ago. Production in the preceding month of June totaled 15,904,470 sacks, representing a very small increase over the July output. Two years ago the output for June, representing 64% of the total production, was 12,825,707 sacks, and three years ago 11,551,970 sacks.

Complete details of production by various sections for the past three years are shown in the following table:

TOTAL MONTHLY FLOUR PRODUCTION

	July, 1945	Previous month	July 1944	July 1943	July 1942
Northwest	*3,465,019	3,810,846	2,840,328	2,599,245	2,386,451
Southwest	5,467,239	5,677,906	4,906,541	4,932,198	4,360,294
Buffalo	2,245,600	2,236,258	1,910,433	1,925,642	1,689,859
Central and Southeast	*2,466,492	2,447,972	2,197,168	2,344,506	1,728,521
North Pacific Coast	*1,578,507	1,731,488	1,520,939	1,024,116	1,386,845
Totals	15,222,857	15,904,470	13,375,409	12,825,707	11,551,970
Percentage of total U. S. output	73	73	73	67	64

Total Monthly Production of Durum Products‡

‡Nine companies	*715,611	870,785	719,586	648,356	591,338

*Preliminary.

NEW APPOINTMENTS

New York, N. Y.—Bracebridge H. Young, who has been secretary of United States Industrial Chemicals, Inc., has been elected vice president and secretary, it was announced recently. Thomas H. Casson has been appointed comptroller and Francis T. Dodge, president of Dodge & Olcott, Inc., has been elected a director.

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Formula Feeds Sell Below 1944, Despite Higher Ingredients

Washington, D. C.—A study made by Office of Price Administration price officials, from price lists of representative feed manufacturers, reveals that in the four major feeds, prices as of July 30, 1945, were slightly below those at the same time in 1944.

Laying mash prices averaged $67.11 ton, against $68.08 on July 30 a year ago; broiler mash $68.27, against $70.91; hog supplement $65.57, against $66.70; 16% dairy feed $53, against $55.42.

In view of the fact that corn has been scarce for some time and in its place feed mixers have been using higher priced ingredients, such as grain sorghums at approximately $2.40 cwt, Kansas City basis, OPA officials are inclined to believe that feed manufacturers have been absorbing higher costs to a considerable extent.

Since the feed wheat program has been rejected for this year, there has been some speculation over further price increases for feeds. However, OPA price men doubt that there will be any substantial boost from present price levels.

—BREAD IS THE STAFF OF LIFE—

BROOKS ELEVATOR CO. BUYS 1,250,000-BU ELEVATOR

Minneapolis, Minn.—The Brooks Elevator Co. has purchased Elevator C, in Minneapolis, from the Osborne-McMillan Elevator Co. The plant, which has a capacity of 1,250,000 bus, will be renovated and equipped for handling barley for malting. The Brooks Elevator Co. recently sold its Union Elevator in Minneapolis to the Froedtert Grain & Malting Co., Inc.

—BREAD IS THE STAFF OF LIFE—

USDA MAY ASK PROTEIN CONSERVATION METHODS

Washington, D. C.—Recognition of the acute tightness in protein feed supplies may be expected shortly, with an official announcement recommending certain conservation measures concerning feeding methods for poultry and dairy herds.

If the advice of feed industry specialists is followed, one of the keystones of the conservation plan will recommend that hatchery production be levelled off at approximately the same monthly production as last year in all areas.

Maximum efficiency in use of proteins undoubtedly will be asked, which will involve an adjustment of the protein content of dairy feed rations and a reduction of the protein content in poultry feeds. These economies can be effected, it is believed, without lowering efficiency of production and the savings obtained will provide supplies to feed the maximum number of birds.

Any conservation program cannot be effectual without the close cooperation of the formula feed industry, it is pointed out. Feed manufacturers and distributors are seen as influential forces in educating feed consumers to the necessity of the utmost in feed conservation during the next few months.

In connection with dairy protein feed conservation, the abundant pasture conditions available this year in most areas should permit dairy men to reduce their grain and protein use considerably, it is believed, and these supplies conserved until later in the year when the animals can be put on dry feeds.

When and if the United States Department of Agriculture sees fit to issue a conservation statement shortly, it will mark another reversal of the previously enunciated policy of Secretary Anderson, who prior to his accession to his job advocated expanded production of poultry. This statement was made before he had a chance to study the problems involved and to meet the men on whom he has to draw for policy direction. A strong statement on feed conservation is seen as necessary by specialists here, even though it does expose the weakness of the Secretary's previous stand. It will have the effect of calling attention to the fact that further meat production expansion cannot be undertaken at this time.

—BREAD IS THE STAFF OF LIFE—

IOWA SEED CO. BUILDING SOLD TO BOEKE FEED CO.

Des Moines, Iowa.—The Boeke Feed Co., for the last 11 years at 208 Elm Street, has purchased the Iowa Seed Co. building at 204 S. W. Second Street, and will get possession Sept. 1. The three-story structure is 66x132 feet, and will give the Boeke Feed Co. four times its present space. Howard Boeke, president of the firm, said new machinery and equipment will be installed which will increase the company's feed mixing capacity five times. He added that from six to eight weeks will be consumed in modernizing the plant and remodeling the building. The company's elevator at Campbell, Iowa, will be retained for storage.

—BREAD IS THE STAFF OF LIFE—

DULUTH-SUPERIOR GRAIN RECEIPTS NEAR RECORD

Duluth, Minn.—Grain receipts at Duluth-Superior during the 1944-45 crop year established a 20-year high volume of 198,921,000 bus, and came within 1,139,000 bus of equaling the all-time record established in 1924-25. Shipments last year totaled 185,278,000 bus.

During May, June and July of this year elevators received an average of 23,000,000 bus per month and shipped out at the rate of 22,600,000 bus monthly.

Boat loading of grain in the present navigation season has been mainly wheat, largely for Commodity Credit Corporation account, and for the past three months shows a monthly average of about 17,750,000 bus. The lake movement has been regulated by the storage problem at some eastern ports of unloading and the number of boats available to handle the tonnage contracted to move forward.

—BREAD IS THE STAFF OF LIFE—

ENRICHMENT CRITICIZED BY N. H. STATE OFFICIAL

Concord, N. H.—New Hampshire bakers were astounded recently when the state's veteran commissioner of agriculture, Andrew L. Felker, issued a statement bitterly criticizing the flour enrichment law enacted at the 1945 session of the legislature. Commissioner Felker charged that the enrichment program curtailed the use of dairy products in bread recipes and threatened further loss of markets for New Hampshire dairymen "through other planned programs of 'dictation' along this line."

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MARKETS IN DETAIL

U. S. FLOUR MARKETS

THE SOUTHWEST

Kansas City: Sales of flour early in the week were large again in the Southwest reaching 169% of capacity, the same as the previous week, compared with 123% a year ago.

Most of the business was done in anticipation of a large subsidy reduction Aug. 1. Buyers of all sizes were in the market and most of the larger ones covered well ahead.

Mills continue behind in their deliveries and the cancellations of delinquent green dot flour did not materially change the position. Flour business is continuing, although on a much smaller basis, probably as the result of market strength following the CCC new wheat buying methods. Clears continue firm and hard to find. Operations are increasing as the help situation gets somewhat better and mills try to get even with their commitments.

Quotations Aug. 4: established brands of family flour $4.15@4.35, bakers short patent $3.25@3.40, standard patent $3.20@3.35, first clears $2.85@3, second clears and low grade $2.75@2.90; soft winter short patent $3.35@3.48, straight grade $3.25@3.35.

Six mills report domestic business active, 5 fair, 3 quiet, 3 slow and 5 dull.

Oklahoma City: Flour sales averaged 54% last week, compared with 98% the previous week and 59% a year ago. Operations ranged from 15 to 80% and averaged 60%, compared with 73% a week ago and 83% a year ago. There was a slight decline in prices. Quotations, sacks, delivered Oklahoma rate points: hard wheat short patent flour $3.90@4.30; soft wheat short patent $3.90@4.30, standard patent $3.80@4.10, bakers short patent $3.35@3.45, bakers standard $3.25@3.35.

Omaha: A sizable flurry of business developed on the local market early last week as mills rushed to beat the subsidy change. All mills put on campaigns which resulted in family flour sales far above the normal run. One mill reported 500% of capacity sales, a figure never before reached.

The business mostly was gathered in the last few days of July. All mills reported peak production, with seven-day operating schedules.

The subsidy cut of 1½c bu was not enough to make any appreciable changes in quotations. A few quarters had boosts of 3@4c, but others made no change, in accordance with policies of no change unless 5c or more. The market continues strong and sales are very high. As usual army and government orders continued prominent in the buying market.

Quotations Aug 4: family short patent $4.05, standard $3.75, bakers short patent $3.41, high protein clears $3.31, fancy clears $2.95, low grade clears $2.75.

Wichita: Flour sales were good at the opening of last week, but dropped off abruptly with the lowering of subsidies Aug. 1. Mills reported their sales for the week average between 25 and 50%. Mills were operating from 80 to 100%. Lack of labor prevented a full run.

Salina: Numerous inquiries for flour the first part of the week resulted in liberal bookings, but business has slowed down considerably since. Shipping directions are exceptionally good.

Hutchinson: Flour business reached a new peak for the year, with buying particularly heavy prior to Aug. 1, in anticipation of a substantial subsidy cut. Round-lot bookings from bakers were fairly numerous and the family trade was active. Interest continued fairly active in August. Shipping directions came in freely. Prices were firmer.

Texas: A spurt of business in bakers flour in the last days of July amounted to around 150% of capacity while it lasted, but trade then dropped to the usual meager family flour sales, 15 or 20% of capacity. Use of flour, especially family flour, is reported curtailed by the difficulty of obtaining shortening. Operations continue at full maximum capacity. Prices are unchanged. Quotations Aug. 4: extra high patent $3.75@4, high patent $3.50@3.75, standard bakers, under .44% ash, not enriched $3.52 (ceiling); first clears, enriched $3.05@3.15, del. TCP.

THE NORTHWEST

Minneapolis: Inquiry has been at a standstill most of the last week and so far the current week, but there was enough outstanding business from the preceding week-end to bring the total sales of spring wheat mills for the week ending Aug. 4, up to around 142% of capacity. The preceding week, the total booked was around 200%, and a year ago 97%.

The big mills are booked ahead for a long time to come and are holding prices tight against the ceiling. Even clears, which showed weakness a couple of weeks ago, have strengthened, and are scarce for nearby shipment. Shipping directions are coming in faster than some mills can comfortably care for.

Interest centers in government business that mills have not been able to fill within contract time. Directions on some of this have been cancelled, temporarily, but it is understood that the contracts of some southwestern mills have been canceled outright, and spring wheat millers, naturally, are wondering what will happen to some of their delayed bookings.

Quotations Aug. 6: established brands family flour, enriched $4.30@4.46, high gluten bakery flours $3.54, bakery short patent $3.44; first patent $3.44, standard patent $3.34, fancy clear $3.24@3.34, first clear $3@3.10, second clear $2.70@2.90, whole wheat $3.30@3.54.

Interior mills, including Duluth: The current lull in inquiry, following the activity of the previous week, is not surprising. Most mills have heavy bookings and small lot orders still are coming in. Shipping directions are plentiful. Demand for millfeed is extremely brisk, both local and shipping.

THE CENTRAL WEST

Chicago: The flour market continued active the first part of last week and a good volume of business was reported. However, sales fell off toward the end of the week and only a small amount of scattered business was done. Shipping directions continued good. Family flour business was nil and only small scattered sales were made. Deliveries were good. Quotations Aug. 4: spring top patent $3.50@3.57, standard patent $3.40@3.47, first clear $3.20@3.44, second clear $2, family flour $4.51; hard winter short patent $3.50@3.57, 95% patent $3.40@3.47, first clear $3@3.29; soft winter short patent $3.45@4.31, standard patent $3.26@4.06, first clear $2.75@3.16.

St. Louis: A decided improvement in flour buying was reported by mills last week. Some fair-sized lots were placed on the books with a good scattering of orders from all directions for prompt to 120 days' shipment. Prices were mixed. Spring wheat types were tight against the ceiling, Kansas 5@10c under, while soft was 20@25c under. There was an exceptional demand for clears at firm prices. Jobbers reported a decided improvement in buying. Bakers were booking some fair-sized parcels for prompt to 120 days' shipment. Nothing has developed that might help the trade in regard to sugar or shortening requirements.

Central state mills had a very good run on new bookings. The demand was more general than of late. Hard and soft wheat flour prices being quoted under the ceiling.

Quotations Aug. 4: soft winter wheat patent $3.98, cake flour $4.58, straight $3.74, family short patent $4.29, straight and 95% $4.29, first clear $3.32@3.75; hard winter bakers patent $3.44, family patent $3.57@3.83, straight and 95% $3.44@3.49, first clear $2.85@3.38; spring wheat patent, straight and 95% $3.44.

Cleveland: Flour business these days is operated like a horse race—it is all done in the home stretch. The selling of flour as far as contracts are concerned is being done in the last three days of the month, and then the trade becomes quiet. There has been practically no flour sold since the August subsidy was announced. Most buyers were surprised, thinking that the subsidy cut would be at least 3c bu.

Large bakers and jobbers are well taken care of through August and September. The small baker has not been inclined to make contracts; in fact the corner baker does not know whether or not he will be open from week to week. The extreme shortage of sugar makes it almost impossible for the small baker to bake cakes, and he claims there is no profit in bread and rolls.

Family flour business is at a standstill. The extreme hot weather and shortage of points to buy fats make home baking difficult at this time.

Quotations Aug. 4: spring first patent $3.70@3.80, standard patent $3.60@3.70, first clear $3.30@3.50; hard winter short patent $3.50@3.60, 95% patent $3.40@3.50; soft winter short patent $4.30@4.50, straight $3.20@3.40, first clear $3@3.20.

Toledo: Those wanting flour soon may be obliged to look for a mill that could accommodate them. Almost unprecedented sales have given mills bookings to capacity for several months ahead, in instances even to the first of January. It has not been necessary for millers to exert themselves in making sales, or to cut prices, although they have endeavored to take care of their regular trade. Millers are very busy as result of the accelerated movement of new wheat, and in preparation for what looks like an exceptional year in milling. Not in years has there been a more promising outlook, aside from labor and car shortage.

EASTERN STATES

Buffalo: Demand continues quite brisk for all types of flour, notwithstanding the heavy bookings for bakery and family requirements during the last week in July. All mills are crowded with orders at this time. Clears are scarce and very firm in price. With stocks in many instances still under par, the trade is looking forward to a good demand this month.

Quotations Aug. 4, cottons: spring first patent $3.80, standard patent $3.70, first clear $3.45; hard winter short patent $3.80; 95% patent $3.70, first clear $3.35; soft winter short patent $3.75, first clear $3.10.

New York: Active pre-subsidy sales have covered buyers' flour needs, not only for the immediate future, but in some instances to the first of the year. Bookings were made by all branches of the trade, the large bakers being the heaviest buyers, while some of the smaller trade were limited by mills' disinclination to sell for distant shipment. In general 60- to 90-day bookings were made. All flours shared in the buying, the chain bakers being heavy purchasers of southwesterns and substantial spring sales going to the medium-sized bakers and jobbers.

Since the announcement of the subsidy, buying is practically at a standstill, with all content to wait, possibly for another month, to buy substantially again. Prices are firmer on several grades, spring clears being scarce and nearly as high as standard patents, while southwestern quotations on clears are difficult to find because of their scarcity. Cake flours from the East reflect poor weather and crop conditions and also heavy sales in outside channels. Prices are considerably higher. Sales of these flours in small local bakeries are currently poor because of the numerous shutdowns among this group due to ingredient and labor shortages.

Quotations Aug. 4: spring high glutens $3.95, standard patents $3.65@3.75, clears $3.50@3.65; southwestern short patents $3.75@3.85, standard patents $3.60@3.75, clears $3.33@3.45; soft winter straights, Pennsylvania $3.65@3.70, Pacific coast $3.71@3.77.

Philadelphia: There was a fairly active demand early in the week, influenced largely by an anticipated sharp drop in the August subsidy rate. However, the actual decline of 1½c on wheat ground outside the Pacific coast area, is less than some of the trade had estimated, and had little effect on mill quotations. As a result, inquiry has subsided and activity is at a near standstill. Prices generally are firm, and mills are offering sparingly. This is particularly true of soft wheat, as persistent rains have caused much sprouted and tough wheat and created fears for future supplies.

Quotations Aug. 4: spring wheat short patent $3.80@3.83, standard patent $3.70@3.73, first spring clear $3.55@3.60; hard winter short patent $3.80@3.83, 95% $3.70@3.73; soft winter straights, nearby $3.40@3.50.

Pittsburgh: Considerable spring wheat flour activity developed the first part of last week. The majority sold prior to Aug. 1 discounted ceilings by 3 to 5c. Southwestern flours were 5 to 10c under and getting the majority of sales because of the lower price. One large sale of southwestern flour was rumored at 20c under the ceiling. Disappointment is expressed by flour salesmen and brokers because the last days of July did not equal the sales of the same period of June. After Aug. 1 flour prices firmed at the ceiling on spring wheat, with only a few mills 2 or 3c under. Southwestern flours were offered a few cents lower than spring wheat types after the August subsidy announcement. Shipping directions are exceptionally good.

Quotations Aug. 4: hard winter bakers short patent $3.70@3.80, straight $3.60@3.70, high gluten $3.90, first clear $3.22@3.53; spring bakers short patent $3.75@3.80, standard $3.65@3.70, high gluten straight $3.90, first clear $3.47@3.60; soft winter bakers cake flour $4.35@4.60, intermediate grade $3.90, straight $3.67; Pacific coast $3.73, family flour $4.10@4.71.

THE SOUTH

New Orleans: No change is evident in the flour market here. Buyers anticipated a reduction of 4c in the government subsidy and only getting the 1½c did not change prices much. In general conditions are quiet. Quotations Aug. 4: spring wheat $3.67@3.70, standard patent $3.47@3.50; hard winter short $3.55@3.60, winter straights $3.57@3.60.

Nashville: New sales of flour were good the last two days of July, ranging from one car to a few carlots, consisting of some 95's and patents, both soft and hard, for distributed 120-day shipment. Shipping directions are very good. Outbound shipments to merchants, jobbers and wholesalers in the South and Southeast range from slow to fair. The extremely hot weather has definitely curtailed the sale of family flour to housewives the past two weeks and merchants are not carrying large stocks, but this is normal for this season. All bakery products are selling exceptionally well. Due to the scarcity of so many ingredients, most bakers are limiting their customers to one pie, one package of cookies, etc. Flour prices are about unchanged from a week ago.

Quotations Aug. 4: soft wheat cake flour $4.59, soft wheat cake flour, not over .41% ash $3.92; soft wheat cake flour, .41% or more ash $3.69; soft wheat short patent family flour $5@5.10, standard patent $4.85@5, straight $4.60@4.85, clear $4.15@4.45.

PACIFIC COAST

Portland: There was some movement of flour last week, but bookings were light as compared with the previous week. Toward the end of July there was increased activity on the part of bakers and wholesalers who were fearful of a lower subsidy, but mills were not pressing for business at any time, due to production problems. Most of the mills are having difficulty in securing labor to clear flour from their mills, and are paying more attention to that problem than to new selling. They are doing their best to take care of their regular bakery trade, but are not pressing sales. Mills have bookings on both lend-lease and for the military. This is spread all the way from August to late in the calendar year. Mills endeavor to take care of all the requirements of the government, and this at times pinches the regular domestic trade. But on the whole, they are able to keep their regular trade satisfied.

Quotations at the close of the week, 100's, cottons: all Montana $3.60, high gluten $3.60, bluestem bakers $3.33, bluestem topping $3.30, cake $3.80, pastry $3.08, pie $3.81, fancy hard wheat clears $3.30, whole wheat 100% $3.30, graham $3, cracked wheat $3, Wisconsin white patent $5.28.

CANADIAN MARKETS

Toronto-Montreal: Flour business in this part of Canada is active. Domestic buyers are taking the usual quantities regularly. A substantial amount was sold to the West Indies during the week. That was the only new exporting done. No announcement has been made with regard to the export price after the end of August, so that new orders from the British Ministry of Food for the fall months cannot be taken. A heavy volume of business is awaiting the price announcement by the Canadian Wheat Board. In the meantime, mills have large quantities of flour to ship out in August and are running to capacity. Domestic prices are at the ceiling and the export price is unchanged for August. Quotations Aug. 4: top patents $5.05 bbl, seconds $4.40, bakers $4.30, in 98's cotton, mixed cars, track, Toronto-Montreal freights, add 10c extra where cartage is performed. For export, government regulation flour $10.75 per 280 lbs, f.a.s., Montreal, August, seaboard.

The prospect for new crop winter wheat flour business is good, but no announcement has yet been made as to the amount of the equalization fee on new crop winters for export and export permits are not being issued. The Wheat Board wants to be assured of sufficient wheat to supply the domestic trade before permitting exports. Deliveries dry up sometimes after the first rush of grain to market. Prices are unchanged. Quotations Aug. 4: Ontario winter straight $5.50 bbl, in second-hand cottons, Montreal freights; for export $6.25 bbl, in cotton bags, Canadian seaboard, plus equalization fee of $1.25.

Ontario winter wheat is coming out freely. In early parts of the province harvesting is completed. The quality is good, but some of the grain is high in moisture content. Ceiling prices prevail. Quotations Aug. 4: $1.26 bu, Montreal freights, which is equivalent to $1.12@1.14 bu, f.o.b., shipping points, according to freights.

Winnipeg: There was no new export business in Canadian flour last week. Apart from the continued good domestic demand, mills have little to look forward to in the way of new business, until such time as the authority for the purchase of flour for export overseas has been allocated. Up until the end of the war in Europe, Canadian flour for export was purchased largely under mutual aid agreement, but since this form of purchasing has apparently been done away with, there is nothing to suggest that the necessary authority for purchasing additional supplies has been voiced in UNRRA, which is now understood to be the only organization responsible for furnishing the necessary food supplies to European areas. Domestic supplies are moving freely. Quotations Aug. 4: top patent springs for delivery between Fort William and the British Columbia boundary, $5.20 cottons, second patents $4.80, second patents to bakers $4.60.

Vancouver: Inability of shippers to secure ocean tonnage is holding export flour business from this port to a bare trickle. There is a good demand from many countries, exporters state, but until some tonnage is released from the war trades, little business can be anticipated. At the present time prospects of additional tonnage being diverted here are remote as the Pacific war rushes to its climax.

The domestic trade is reported only fair. Dealers are finding only a limited outlet in the small bakeries and also the stores, due to sugar and shortening scarcity, but the large bakers concentrating on bread manufacture, are consuming steady quantities. Supplies here are generally fair for the hard wheat grinds, but low on Ontario-milled soft wheat product.

Cash car quotations for hard wheat flour as of Aug. 4 for cotton 98's are unchanged: first patents $5.40, second patents $5 and vitamin B $4.90. Ontario soft wheat flour is unchanged to the trade at $7.50.

MILLFEED MARKETS

Minneapolis: Instead of diminishing, demand for millfeed seems to be increasing right along. Buyers keep importuning mills for offerings, but the latter are oversold for 60- to 90-day shipment, and can see nothing in the outlook to change the picture. A year ago, with a heavy new crop flour business under way, it was felt that there was a possibility that feed prices might break below the ceiling, but northwestern prices held firm, and this year the situation is even stronger. There is no longer any thought of a decline below ceiling, so millers are limiting bookings to 90-day shipment, and allocating what they have to offer among as many customers as possible. Ceiling: $37.75.

Oklahoma City: Activity in millfeeds continues, with a dearth of supplies. There was no change in prices. Quotations, burlaps, carloads for southern deliveries: bran, millrun and shorts $1.95 cwt; for northern deliveries $1.90.

Omaha: There seems to be no slackening in the demand for this commodity. The market is tight as ever, and the supply

A SUMMARY OF FLOUR QUOTATIONS IN LEADING MARKETS

Week-end flour quotations, per sack (cwt), packed in 100 lbs. (Canadian quotations per bbl of 196 lbs.) All quotations on basis of carload lots, prompt delivery.

	Chicago	Minneapolis	Kansas City	St. Louis	Buffalo	New York	Baltimore	Philadelphia	Boston	Cleveland	†Nashville
Spring first patent	$3.50@ 3.57	$....@ 3.44	$....@....	$....@ 3.44	....@ 3.80	††$....@ 3.95	$....@....	$3.80@ 3.83	$3.85@ 3.87	$3.70@ 3.80	$....@....
Spring standard patent	3.40@ 3.47	....@ 3.34	....@....	....@....	....@ 3.70	3.65@ 3.75	....@....	3.70@ 3.73	3.75@ 3.77	3.60@ 3.70	....@....
Spring first clear	3.20@ 3.44	3.00@ 3.10	....@....	....@....	....@ 3.45	3.50@ 3.65	....@....	3.55@ 3.60	3.46@ 3.48	3.30@ 3.50	....@....
Hard winter short patent	3.50@ 3.57	....@....	3.25@ 3.40	....@ 3.44	....@ 3.80	3.75@ 3.85	....@....	3.80@ 3.83	3.85@ 3.87	3.50@ 3.60	....@....
Hard winter 95% patent	3.40@ 3.47	....@....	3.20@ 3.35	3.44@ 3.49	....@ 3.70	3.60@ 3.75	....@....	3.70@ 3.73	3.75@ 3.77	3.40@ 3.50	....@....
Hard winter first clear	3.00@ 3.29	....@....	2.85@ 3.00	2.85@ 3.38	....@ 3.35	3.33@ 3.45	....@....	....@....	....@....	....@....	....@....
Soft winter short patent	3.45@ 4.31	....@....	3.35@ 3.48	....@ 3.98	....@ 3.75	....@....	....@....	....@....	3.88@ 3.90	4.30@ 4.50	....@ 4.59
Soft winter straight	3.26@ 4.06	....@....	3.25@ 3.35	....@ 3.74	....@....	3.65@ 3.70	*....@....	*3.40@ 3.50	3.73@ 3.75	3.20@ 3.40	4.60@ 4.85
Soft winter straight (Pac. cst.)	....@....	....@....	....@....	....@....	....@....	3.71@ 3.77	....@....	....@....	....@....	....@....	....@....
Soft winter first clear	2.75@ 3.16	....@....	....@....	3.32@ 3.75	....@ 3.10	....@....	....@....	....@....	3.63@ 3.65	3.00@ 3.20	4.15@ 4.45
Rye flour, white	3.85@ 4.07	4.25@ 4.35	....@....	....@ 4.64	....@ 4.35	4.20@ 4.35	....@....	4.15@ 4.35	....@....	4.00@ 4.20	....@....
Rye flour, dark	3.35@ 3.62	3.59@ 3.74	....@....	....@ 4.14	....@ 3.85	....@....	....@....	....@....	....@....	3.20@ 3.40	....@....
Semolina, No. 1	....@ 3.75	....@ 3.62	....@....	....@ 3.99	....@ 3.98	....@ 4.03	....@....	....@ 4.03	....@....	....@....	....@....

	Seattle	S. Francisco	Standard patent—	Seattle	San Francisco		Toronto	**Winnipeg		Toronto	**Winnipeg
Family patent	$....@....	$....@....	Dakota	$....@....	$....@....	Spring top patent¶	$....@....	$....@ 5.20	Spring exports§	$....	....
Soft winter straight	....@....	....@....	Montana	....@....	....@....	Spring second patent¶	....@....	....@ 4.80	Ontario winter straight‡	....	....
Pastry	....@....	....@....				Spring first clear¶	....@....	....@....	Ontario exports§	....	....

*Includes near-by straights. †Nashville prices basis f.o.b. Ohio River points for soft winter wheat flour. **In cottons, Fort William basis. ‡Secondhand cottons. §98-lb cottons. §§80-lb cottons. ††High glutens.

definitely is limited, possibly becoming more so because of increasing shortages in other feed lines. Quotations: $36.50 ton, ceiling.

Wichita: Millers can dispose of feed as fast as produced. They could supply from 50 to 100% more customers if they had the millfeed to sell. Quotations last week were reported at full Wichita and Kansas City ceilings.

Hutchinson: Keen demand kept warehouses swept clear of millfeed and enabled mills to book just as far ahead as the situation warrants. Buyers were eager for all classes and many took clear flour at near ceiling prices with the feed. Quotations: bran, mill run and grey shorts $36.50 @37.50, Kansas City basis.

Salina: Demand is excellent with prices steady and supplies insufficient. Bran and shorts continue at the ceiling.

Fort Worth: No increase in supplies is evident, while demand continues unsatisfied. Quotations, ceiling, carlots, wheat and grey shorts $42.20, sacked, del. TCP; mixed cars $1 ton higher.

Toledo: All millfeeds are selling readily at ceiling levels, $42.34 bulk, f.o.b. Toledo, and demand would take more than can be produced if it could be had.

Cleveland: The demand for feed continues at a swift pace. Truckers are obtaining most of the feed, all at ceiling prices. Quotations: spring bran, hard winter bran, standard middlings, flour middlings and red dog, all $42.90 ton.

Buffalo: The millfeed situation remains critical with demand far in excess of supplies. There has been virtually no change for several weeks in the over-all picture. The trend is firm. Quotations: all varieties $41.55 ton, straight carlots, f.o.b. Buffalo.

Philadelphia: Demand is active, while supplies are small. Prices are firmly held. Standard bran, pure spring, hard winter, soft winter, std. midds., flour and red dog, all $44.84@45.34 ton.

Pittsburgh: The millfeed situation remains unchanged. Demand still is far in excess of supplies. Bran, standard middlings, red dog, when located, sell readily at ceiling levels of $44.85 ton. Canadian oats continue plentiful.

Nashville: Demand for millfeed has been heavy and offerings still are limited. Some dealers indicate that it is practically impossible to secure bran or shorts. Quotations continue at the ceilings, both bran and shorts being quoted at $43.30@44.30 ton.

Portland: The millfeed picture in the Pacific Northwest is unchanged, with mills able to get rid of their current stocks as fast as they are produced. Country feed mixers are stocking up to the best of their ability, as the shortage of protein feed is becoming more acute each day. Shortages of corn and soybean are particularly acute and millfeed is being used extensively to take up the slack. Ceilings of $36.50 ton are easily maintained.

Ogden: Millfeed demand exceeds the supply with the situation getting worse and every available pound going into manufacture of poultry and animal feed. Plants are cautious not to oversell. Plants are booked into September. Quotations: red bran and millrun, blended, white and midds., $36.30, carload lots, f.o.b. Ogden. Denver prices: $38, ceiling. California prices: $42.08, carlots, f.o.b. San Francisco, with Los Angeles prices up $1, ceiling.

Toronto-Montreal: The summer months have brought little decline in demand for millfeeds. It is true that bran and shorts are easier, but middlings are much wanted and the supply is inadequate. It is now possible to fill orders for bran and shorts promptly, but there is little surplus. At ceiling prices millfeed is good value. Quotations: bran $29, shorts $30, midds. $33 ton, net cash terms, bags included, mixed or straight cars, Montreal freight basis.

Winnipeg: Millfeed continues in excellent demand and supplies still are far short of requirements. Despite the unfavorable crop prospects over large sections of Alberta and Saskatchewan, there is no indication of any improvement in sales in the three prairie provinces. Practically all output from western mills is moving to eastern Canada. Quotations: Manitoba and Saskatchewan bran $28, shorts $29; Alberta bran $25.50, shorts $26.50; small lots ex-country elevators and warehouses $3 extra.

Vancouver: Domestic demand for all types of millfeed in this territory remains at a comparatively high level, with indications this position will be maintained and increased with the fall months. Western mills still are hesitant about offering, with the result that dealers are unable to keep any stocks on their floors. Further, there is no sign of any relaxation in the strict rationing which dealers are maintaining over all orders. Prices are firm at ceiling levels. Cash car quotations: bran $29.80, shorts $30.80, midds $33.80.

RYE PRODUCTS

Minneapolis: New crop rye is beginning to arrive, and is of good milling quality. The futures market, however, is strong, and closed about 2½c bu higher for the week. Milling demand is good for cash offerings, with buyers bidding 10@15c over September for the choicest of the receipts. Millers report renewed interest on the part of big buyers, with some contracting for round-lots, the first in a long time. Stocks in the hands of the trade are believed to be abnormally light, so continuance of good buying is looked for. Quotations are unchanged. Pure white rye flour $4.25@4.35, in cottons, f.o.b. Minneapolis; pure medium $4.15@4.25, pure dark $3.59@3.74.

Chicago: Business in rye flour last week continued to be confined to small scattered sales. Directions were only fair. White patent rye $3.85@4.07, medium $3.75@3.97, dark $3.35@3.62.

Cleveland: There is a very brisk demand for rye flour, due to the small inventories carried by all bakers and jobbers since rye grain has reached the present level. Quotations: patent white rye flour $4@4.20, dark $3.20@3.40.

St. Louis: Prices advanced 24c last week. Sales and shipping directions were a little better. Pure white flour $4.64, medium $4.54, dark $4.14, rye meal $4.39.

Buffalo: Demand for rye flour is excellent. Supplies are fair. The trend is firm. Quotations: cottons, white $4.35, medium $4.25, dark $3.85.

New York: Although rye flour buyers are not purchasing in heavy volume, they show interest and some sales are consummated. Quotations Aug. 3: pure white patents $4.20@4.35.

Philadelphia: An easier feeling has developed in rye flour and prices are slightly shaded. Offerings are only moderate, but more than ample. Buyers are cautious, and operating only as impelled by immediate necessity. White patent $4.15@4.35.

Pittsburgh: Rye flour prices advanced last week. Business was confined to scattered small sales. Only the most urgent needs are bought, because prices are thought to be too high and due for sharp curtailment, when the new crop is harvested. Fancy white $4.30@4.40, medium $4.20@4.30.

OATMEAL MARKETS

Toronto-Montreal: Export orders for rolled oats for shipment via Vancouver were taken by these mills during the week. Domestic trade is quiet. Prices are at ceiling levels. Quotations: rolled oats, $3.15 bag of 80 lbs, cotton, in mixed cars; oatmeal, in 98-lb jutes, $3.85 bag, f.o.b., Toronto or Montreal.

Winnipeg: Demand for rolled oats and oatmeal is very draggy. Mills are operating part time, and the output, while moderate, is ample to take care of buying orders. Quotations: rolled oats, in 80-lb sacks, $3.25, in the three prairie provinces; oatmeal, in 98-lb sacks, 20% over rolled oats.

Minneapolis: Rolled oats were quoted on Aug. 6 at $5.60 per 100 lbs, bulk; 20-oz packages $2.65 case, 48-oz packages $2.89.

GRAIN FUTURES—CLOSING PRICES

Closing prices of grain futures at leading markets, in cents per bushel:

WHEAT

	Minneapolis		Chicago		Kansas City		Seattle		Duluth	
	Sept.	Dec.	Sept.	Dec.	Sept.	Dec.	Sept.	Dec.	Sept.	Dec.
July 31	163⅜	....	165⅛	165½	157⅛	157⅝	....	....	173	....
Aug. 1	163⅜	....	165⅛	165¼	157⅛	157¾	....	....	173	....
Aug. 2	163½	....	165⅜	165⅝	157⅜	158	....	....	173	....
Aug. 3	164⅜	....	166⅝	166⅞	158⅞	159¼	....	....	173	....
Aug. 4	164½	....	167⅛	167	158⅞	159⅜	....	....	173	....
Aug. 6	162¾	162½	165⅞	165⅝	157½	157⅝	....	....	173	....

	CORN				OATS			
	Minneapolis		Chicago		Kansas City		Chicago		Minneapolis	
	Sept.	Dec.	Sept.	Dec.	Sept.	Dec.	Sept.	Dec.	Sept.	Dec.
July 31	....	....	118½	118½	....	....	65⅛	65⅛	61⅛	61⅜
Aug. 1	....	....	118½	118½	....	....	64⅞	64⅞	60⅞	61
Aug. 2	....	....	118½	118½	....	....	64½	64⅝	60½	60½
Aug. 3	....	....	118⅛	117¼	....	....	64⅞	65¼	60⅞	60⅞
Aug. 4	....	....	118⅛	118	....	....	64½	64⅜	60½	60⅞
Aug. 6	....	....	118⅛	117⅝	....	....	62⅝	63¾	59½	59⅞

	RYE				FLAXSEED				BARLEY	
	Chicago		Minneapolis		Minneapolis		Duluth		Minneapolis	
	Sept.	Dec.	Sept.	Dec.	Sept.	Dec.	Sept.	Dec.	Sept.	Dec.
July 31	150	143¾	142⅞	137	310	....	310	....	....	....
Aug. 1	147⅞	142¼	141⅜	135¾	310	....	310	....	....	....
Aug. 2	147⅝	141¼	139⅜	134⅜	310	....	310	....	....	....
Aug. 3	148¼	143¼	141⅝	136⅝	310	....	310	....	....	....
Aug. 4	147¾	142⅝	141⅝	136½	310	....	310	....	....	....
Aug. 6	146¼	141½	140¼	135	310	....	310	....	....	....

UNITED STATES VISIBLE GRAIN SUPPLY

Visible supply of grain in the United States, as compiled by the secretary of the Chicago Board of Trade, in bushels (000's omitted) of date July 28, and corresponding date of a year ago:

	Wheat		Corn		Oats		Rye		Barley	
	1945	1944	1945	1944	1945	1944	1945	1944	1945	1944
Baltimore	4,137	5,733	184	8	22	55	75	97	3	3
Boston	495	..	..	..	..	..	250	..	..	..
Buffalo	5,021	13,437	50	393	2,508	1,449	790	2,710	409	620
Afloat	757	191	227	..	..	..	..	..	..	..
Chicago	3,350	9,585	1,014	5,125	2,935	640	2,102	12,180	899	644
Afloat	..	..	..	..	..	..	35	..	..	..
Duluth	17,083	8,547	373	..	701	150	45	182	2,361	1,764
Fort Worth	9,899	13,462	182	132	824	539	27	11	56	163
Galveston	1,429	3,584	9	..	..	..	..	..	..	..
Hutchinson	9,470	9,701	..	..	..	..	..	..	259	..
Indianapolis	1,302	2,732	969	1,120	74	89	43	4	13	..
Kansas City	17,965	27,282	816	826	76	26	112	154	442	556
Milwaukee	703	2,493	69	139	6	2	..	134	2,962	1,831
Minneapolis	2,961	13,295	206	455	417	47	677	2,206	3,273	960
New Orleans	775	1,005	499	11	7	77	..	10	..	89
New York	1,284	857	112	2	7	10	21	1	5	6
Omaha	1,859	6,775	1,287	1,967	102	99	3	89	80	81
Peoria	13	344	504	574	7	..	..	..	51	98
Philadelphia	816	2,445	122	91	16	8	425	21	9	..
St. Louis	2,551	6,747	627	1,100	168	115	30	46	183	77
Sioux City	105	440	122	95	16	23	5	23	1	33
St. Joseph	2,144	3,931	861	444	539	298	2	3	69	50
Wichita	7,011	7,610	3	3	..	2	..	..	138	150
Lakes	..	250	..	..	..	..	217	..	..	..
Totals	91,130	140,452	8,124	12,485	8,409	3,629	4,859	17,870	11,163	7,125

Western Canada Visible Grain Supply

Visible supply of grain in the western inspection division of Aug. 4, 1945, and receipts and shipments during the past week, in bushels (000's omitted):

Fort William and Port Arthur—	Wheat	Durum	Oats	Barley
Semi-public terminals	50,257	1,374	10,815	2,752
Private terminals	..	..	29	2
Totals	50,257	1,374	10,844	2,754
Vancouver-New Westminster	13,932	..	407	11
Int. public and semi-public elevators	13,932	..	407	11
Churchill	1,878	..	..	..
Prince Rupert	985	..	..	..
Victoria	689	..	..	..
Totals	77,644	1,374	11,277	2,773
Year ago	55,519	1,594	13,579	5,762
Receipts during week—				
Ft. Wm.-Pt. Ar.	4,743	54	485	227
All other public and semi-public terminals, western div.	208	..	25	..
Totals	4,951	54	509	227
Shipments during week—				
Ft. Wm.-Pt. Arthur—				
Lake	4,266	12	638	251
Rail	2	..	26	14
All other public and semi-public terminals, western div.	811	..	19	..
Totals	5,079	12	683	266
TOTAL RECEIPTS Aug. 1, 1945, to Aug. 4, 1945				
Ft. Wm.-Pt. Ar.	4,743	54	485	227
All other public and semi-public terminals, western div.	208	..	25	..
TOTAL SHIPMENTS Aug. 1, 1945, to Aug. 4, 1945				
Ft. Wm.-Pt. Ar.	4,268	12	664	266
All other public and semi-public terminals, western div.	811	..	19	..

United States Grain Stocks

Commercial stocks of grain in store and afloat at the principal markets of the United States at the close of the week ending July 28, 1945, and July 29, 1944, as reported to the United States Office of Marketing Services (WFA), in bus (000's omitted):

	American		Canadian in bond	
	July 28 1945	July 29 1944	July 28 1945	July 29 1944
Wheat	114,729	170,786	12,587	15,117
Corn	8,292	12,392	...	...
Oats	9,671	4,440	2,943	1,043
Rye	4,701	18,052	107	1,533
Barley	13,654	8,261	511	14
Flaxseed	149	1,290	...	...
Soybeans	2,608	2,727	...	...

Stocks of United States grain in store in Canadian markets July 28 (figures for corresponding date a year ago given in parentheses): wheat, none (1,567,000) bus; corn 167,000 (935,000); soybeans, none (271,000).

Millfeed Receipts and Shipments

Receipts and shipments of millfeed at the principal distributing centers for the week ending Aug. 4, in tons, with comparisons:

	Receipts		Shipments	
	1945	1944	1945	1944
Minneapolis	...	...	20,280	15,690
Kansas City	675	...	6,200	...
Philadelphia	100	320	...	...
Milwaukee	30	...	4,470	3,870

WANT ADS

Advertisements in this department are 5c per word; minimum charge, $1. (Count six words for signature.) Situation Wanted advertisements will be accepted for 2½c per word, 50c minimum. Display Want Ads $4 per inch per insertion. All Want Ads cash with order.

HELP WANTED

WANTED—SECOND MILLER. FORT MORgan Mills, Fort Morgan, Colo.

SALESMAN WANTED FOR CHICAGO TERritory. Write Big Jo Flour Mills, 720 N. Michigan Ave., Chicago 11, Ill., stating qualifications.

WANTED — SECOND MILLER FOR 500-bbl mill, making mostly family flour, Kansas wheat. Address 7332, The Northwestern Miller, Minneapolis 2, Minn.

WANTED — HEAD MILLER WHO IS capable of installing and operating feed plant. Fine steady position for right man. Address 7441, The Northwestern Miller, Minneapolis 2, Minn.

SECOND MILLER, 1,400 CWT MODERN mill, Denver area, permanent. In applying give full particulars about yourself with references. Address 7454, The Northwestern Miller, Minneapolis 2, Minn.

WANTED—SECOND MILLER IN MILLING plant, 3,000 cwt daily capacity. Located in good city of 6,000 central Kansas. Position available Aug. 10. Also interested in feed packer and truckers. Apply in person or write, giving full particulars of experience. The Abilene Flour Mills Co., Abilene, Kan.

SITUATIONS WANTED

SALESMAN — BAKERY AND FAMILY flour experience; executive ability; accustomed producing volume business; pleasing personality; acquaintance; selling technique; references; available now. Address 7444, The Northwestern Miller, 612 Board of Trade Bldg., Kansas City 6, Mo.

WANTED—POSITION AS SUPERINTEND-ent of production in flour mill of 300 to 500 bbls capacity by an all around miller of many years milling all kinds of wheat. Single man, good references from past employers. Age 65 years, active, a live wire. Address 7445, The Northwestern Miller, Minneapolis 2, Minn.

MACHINERY FOR SALE

ALLIS CHALMERS GYROSIFTER 6-DECK — 31"x31" — Screen Size (new). Rubber Lining Engineers, 2700 West 35th St., Chicago 32, Ill.

MACHINERY WANTED

WANTED—BRIGHTWOOD BOX MACHINE —Pneumatic scale packaging machine; two flour blenders. Address 4970, The Northwestern Miller, Minneapolis 2, Minn.

OPPORTUNITY

An opportunity that comes but a few times in a lifetime for a certified public accountant or a good man with equal training and experience, having a good knowledge of grain and milling accounting, plus the ability to handle people.

Permanent—opportunity for further advancement to executive responsibilities—good pay.

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Address 7413, The Northwestern Miller, 612 Board of Trade Bldg., Kansas City 6, Mo.

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BOX 1203, 1474 BROADWAY, NEW YORK (18), N. Y.

ROCHESTER, N. Y., BAKERIES SCHEDULE STRIKE VOTE

Rochester, N. Y.—Efforts of Hyman Dishner, field examiner of the National Labor Relations Board, at a conference attended by representatives of Bakers' Union 494 (AFL) and managers of three of the city's largest bakeries to persuade the union to withdraw its strike vote notice were unsuccessful July 31.

As a result, Mr. Dishner set machinery in motion to take the strike vote at the three plants on Aug. 11 under provisions of the Smith-Connally Act.

Mr. Dishner was sent to Rochester following failure of U. S. conciliators to settle the controversy over new provisions in renewal of a contract that expired last June 30. On July 8, 420 members of the union at plants of the General Baking Co., Continental Baking Co. and National Biscuit Co. walked out in a three-day strike which was not authorized by the international union. Ordered to do so by the international, the men voted to return to work July 10. Joseph Stenglein, union business agent, claimed the work stoppage was due to the companies' refusal to modify a "speed-up system."

Company representatives pointed out on July 31 both sides had certified the controversy, involving several issues, to the War Labor Board. Mr. Dishner advised the union to withdraw the strike vote notice, given to the WLB, because that body now is in the process of setting up a panel and arranging for a hearing. He declared the disputants should allow the WLB to resolve the issues. The union representatives insisted on the strike vote.

——BREAD IS THE STAFF OF LIFE——

W. N. BROCK TO ASSIST CHASE BAG SALES HEAD

William N. Brock, formerly manager at Toledo for the Chase Bag Co., has been promoted to assistant to the general sales manager, R. N. Conners. Henry C. Hancock will become manager at Toledo.

Mr. Brock will assume his new duties Sept. 1 in Chicago. He joined the Chase Bag Co. 11 years ago, having previously been in the construction business in Chicago. After a year in the Chase Chicago sales department, he went to Grand Rapids where he traveled the western Michigan and northern Indiana territory. In 1938, Mr. Brock was transferred to Detroit as sales manager of that office, remaining there until 1942 when he was made manager at Toledo.

Henry C. Hancock, successor as manager at Toledo, has been sales manager there for the past year. Before that he was sales manager at the New Orleans plant, and has been associated with the Chase company for 11 years.

——BREAD IS THE STAFF OF LIFE——

CHARTER ISSUED FOR NEGRO BAKERY IN NASHVILLE, TENN.

Nashville, Tenn. — A charter was issued by the secretary of state last week for a $100,000 bakery to be operated by negroes in Nashville. Leo L. Lillard, owner of the Modernistic Cabinet Co., was listed as president of the corporation. The bakery will afford employment to some 200 negroes, Mr. Lillard said. Headquarters for the company will be at 419 Fourth Ave., North. Others listed on the charter were Willa May Wray, Wray Casket Co., and Florence E. Barnes, cashier of the Union Protective Insurance Co.

——BREAD IS THE STAFF OF LIFE——

Bonded Grain in the United States

Bonded grain in the United States July 28, 1945, in bushels (000's omitted):

	Wheat	Oats	Rye	Barley
Baltimore	1,578	..	..	..
Boston	..	..	..	..
Buffalo	4,330	2,062	..	..
Afloat	625	394	..	..
Chicago	..	169	107	..
Afloat	..	..	..	..
Duluth	..	..	..	178
Lakes	939	574	..	..
Milwaukee	..	..	..	333
New York	1,123	..	..	..
Afloat	1,428	..	..	..
Philadelphia	1,353	..	..	..
Totals	11,376	3,199	107	511
July 21, 1945	10,953	2,787	465	597
July 29, 1944	11,408	1,043	1,258	220

Rye Flour Output

Following is the rye flour output reported to The Northwestern Miller by mills at Chicago, Minneapolis and outside points in the Northwest, in sacks, with comparative figures for the previous weeks:

	July 14	July 21	July 28	Aug. 4
Five mills	35,740	24,833	40,832	*33,404

*Four mills.

Flaxseed Receipts, Shipments and Stocks

Receipts, shipments and stocks of flaxseed at principal primary points for the week ended Aug. 4, in thousand bushels, with comparisons:

	Receipts		Shipments		Stocks	
	1945	1944	1945	1944	1945	1944
Minneapolis	84	76	3	39	50	508
Duluth	21	36	11	254	98	352

Let Us Show You How to Make MORE Money

Does your business need a check-up? You audit your books to see where you've been. Now check your procedures, methods, costs and facilities to see where you're going. Your inquiries are invited.

Send for All the Facts

ARTHUR L. CHANDLER & CO.

Management Engineers

Merchants Exchange ST. LOUIS, MO.

Country Run Wheat

Bought on Order for Mills

★

Hedging Orders

★

GOFFE & CARKENER, Inc.

Board of Trade Building

LD-154 KANSAS CITY, MO.

WESTERN STAR
KANSAS STAR
GOLDEN CREST

★

Smart merchants are confining their sales efforts to flours like these, both to satisfy the tastes of the buyer and to build a business that is a continuous asset.

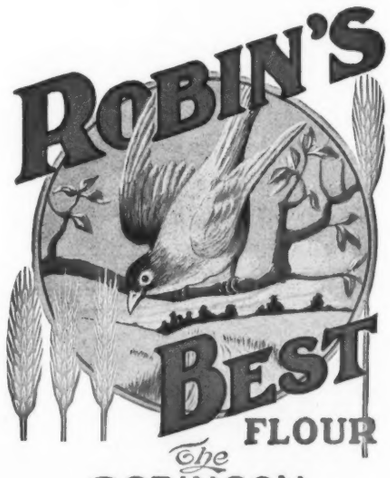
★

The WESTERN STAR MILL CO.
SALINA, KANSAS

After all!
"THERE IS NO SUBSTITUTE FOR QUALITY"

WINGOLD
WHEAT AND RYE
FLOURS
RECOGNIZED FOR
Quality and Shop Performance

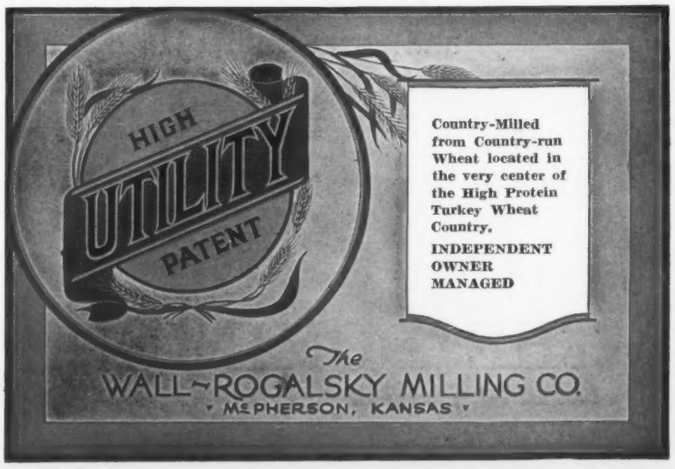
BAY STATE MILLING CO.
WINONA, MINNESOTA
Millers of HARD SPRING WHEAT and RYE FLOURS



The ROBINSON MILLING COMPANY
SALINA, KANSAS

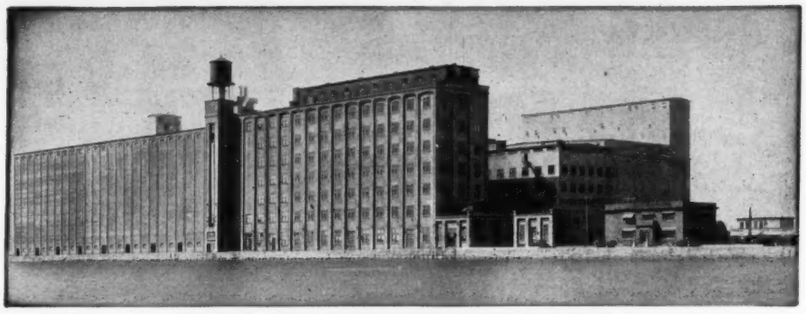
AMERICAN MAID FLOUR
ARROW PROTEIN CONCENTRATES
ARROW LIVESTOCK FEEDS
HIGH PROTEIN HARD WINTER WHEAT
Leaders in Domestic Quality Trade
ARMY E NAVY
Direct Exporters
HOUSTON MILLING CO.
Houston, Texas

WISCONSIN RYE FLOUR
Of Uniform and Highest Quality Made From Wisconsin Grown Rye
White Heather Blue Ribbon Rye Meal
Milled by exclusive rye millers to satisfy the demands of the most critical bakers
GLOBE MILLING CO.
WATERTOWN, WIS.
"WISCONSIN MAKES THE BEST RYE FLOUR"



CANADA'S LARGEST FLOUR EXPORTERS

Head Office— Toronto, Ontario



Cable Address— "Mapleshaw," Toronto, Canada

PORT COLBORNE MILLS—CAPACITY 12,000 BBLS. DAILY

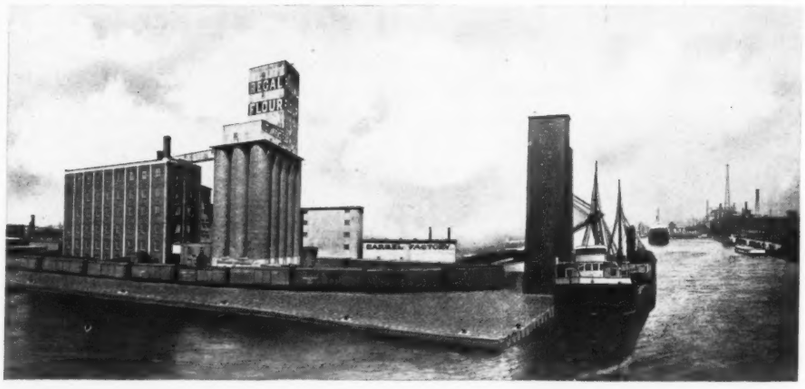
Maple Leaf Milling Co. Limited.

EXPORT OFFICES:
TORONTO NEW YORK VANCOUVER

MILLS AT
TORONTO, ONTARIO MEDICINE HAT, ALBERTA PORT COLBORNE, ONTARIO

The St. Lawrence Flour Mills Co., Ltd.

MONTREAL • CANADA



Millers of Canadian Hard Wheat Flours

"Regal"
"Fleur de Lis"
"National"
"Daily Bread"
"Citadel"

Quality uniformly maintained for over 25 years

CHOICEST CANADIAN *Hard Spring Wheat*

and perfect milling facilities have placed our products in the van.

BRANDS

"VICTORY" - "PRAIRIE BLOSSOM"
"WOODLAND" - - "HOMELAND"

THE DOMINION FLOUR MILLS, LTD.

Cable Address: "DOMFLOUR" MONTREAL, CANADA

WESTERN CANADA FLOUR MILLS COMPANY LIMITED

CABLE: LAKURON TORONTO, CANADA

SPECIALISTS IN MILLING

All Western Canada Hard Wheat Flours

PURITY • THREE STARS
CANADA CREAM • STERLING

GREAT WEST
BATTLE
MAITLAND
HURON

UNIFORM QUALITY GUARANTEED

FLOUR MILLING CAPACITY 9500 BBLS DAILY • ROLLED OATS AND OATMEAL 400 BBLS DAILY

Courtesy C.P.R.

TORONTO, ONTARIO

Beautifully located on the shores of Lake Ontario, Toronto, capital of the Province of Ontario, is Canada's second city in population.

More than 2,000 peace-time industries, greatly increased during the war, give Toronto industrial importance second to none.

The University of Toronto, numerous schools, Osgoode Hall, the Royal Ontario Museum, the Art Gallery and numerous other important institutions contribute to Toronto's leadership as a cultural and educational centre.

A city of homes, beautiful streets, scenic ravines and parks, home of the famous Canadian National Exhibition and gateway to Ontario's playgrounds, Toronto is ever popular to tourists from Canada and the U.S.A.

JUTE BAGS COTTON

OLDEST ESTABLISHED MANUFACTURERS OF

JUTE **BAGS** COTTON

IN CANADA

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Head Office: MONTREAL, QUEBEC

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WOODS MFG. CO. LTD

COTTON AND JUTE BAGS

CABLE ADDRESS "WOODSBAG"

MONTREAL-TORONTO-WINNIPEG-OTTAWA-WELLAND

Grain Inspection

(Continued from page 28.)

grain, but only for a federal supervision of grain inspection. Responsibility is placed on the federal department to fix the grades and to alter or modify them whenever the necessities of the trade may require, and to handle appeals from the inspectors' grading. The shipper has certain responsibilities in securing inspection and invoicing grades. The application of the grades is the responsibility of the inspectors, who are not federal employees. Explanation of the grades and efforts to produce higher grades require educational activities, and the state colleges and extension services are given this responsibility under the Smith-Lever Act.

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"All Risks"
Special Service to Flour Mills on Export and Domestic Ocean and Lake Insurance and Transportation
Thirty-Five Years' Experience in Export Flour Handling
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APPLETON & COX, INC.,
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Grain Shippers
Domestic and Export
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LIMITED
Toronto Canada

W. S. KIMPTON & SONS
Flour Millers
MELBOURNE, AUSTRALIA
Cables: "GLUTEN," Melbourne

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Ismert-Hincke Milling Co.
Kansas City, Mo.

COATSWORTH & COOPER
LIMITED
C A N D
Grain and Feeds
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Successors to Wolverton Flour Mills Co., Ltd.
Canadian Spring and Winter Wheat Flour
"SILVERKING" "GREAT STAR" "WOLF" "KEYSTONE"
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MINER-HILLARD MILLING CO.
WILKES-BARRE, PA.
Manufacturers of
Wheat, Rye, Corn and Buckwheat Flours

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QUALITY UNIFORMLY MAINTAINED SINCE 1887

Lake of the Woods Milling Co., Limited

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"HASTINGS"
Montreal

LAKE OF THE WOODS MILLING COMPANY LIMITED CANADA

ALL
CABLE CODES
USED

Makers of CANADIAN HARD SPRING WHEAT *Flour*

Owning and Operating
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Mills at
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THE LEADING NAME
IN CANADIAN
FLOUR & CEREAL
MILLING—

OGILVIE

Makers of
CANADA'S BEST FLOUR from the WORLD'S FINEST WHEAT
WHEAT THAT IS *Carefully* SELECTED, *Correctly* BLENDED
AND *Really* WASHED

Look at These Celebrated Names
OGILVIE FLOUR ROYAL HOUSEHOLD
GLENORA FAMOUS
BUFFALO

—and These Famous Cereals
OGILVIE OATS WHEAT-HEARTS
BLENDIES TONIK WHEAT GERM
VITA-B WHEAT GERM CEREAL

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The OGILVIE FLOUR MILLS COMPANY LIMITED
MONTREAL CANADA

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MONTREAL FORT WILLIAM
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MEDICINE HAT

SPILLERS LIMITED

Millers of the
HIGHEST QUALITY FLOUR
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PROVENDER AND BALANCED RATIONS
FOR ALL CLASSES OF FARM STOCK

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Cables:
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James Richardson & Sons
LIMITED
Grain Merchants Shippers and Exporters
WINNIPEG · CANADA
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Cable Address: "JAMESRICH"

CANADIAN HARD SPRING WHEAT
529 Elevators in Manitoba, Saskatchewan and Alberta.
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Winnipeg, Manitoba

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FLOUR MILLERS
SYDNEY, N.S.W., AUSTRALIA
CABLE ADDRESS, "GILLESPIE," SYDNEY

LAKESIDE MILLING COMPANY, Ltd.
"BLOSSOM *of* CANADA" "YORK" "NORDIC"
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IT'S IN THE RECORD
with
Robin Hood FLOUR
Laboratory Control
Uniformity
Performance

CANADIAN
SPRING WHEAT FLOUR
ROLLED OATS
OATMEAL

Robin Hood Flour
Mills Limited

Mills and Sales Offices: VANCOUVER · CALGARY · MOOSE JAW · SASKATOON
WINNIPEG · TORONTO · HUMBERSTONE · MONTREAL · MONCTON
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LA GRANGE FLOURS . . .

whether plain or enriched, remain the same high standard, dependable flours that have characterized the products of La Grange Mills over the half century and more of their operation.

This quality pattern is not an accident but the result of painstaking care in wheat selection and careful milling.

☆

You can depend on
LA GRANGE FLOURS

☆

LA GRANGE MILLS RED WING MINNESOTA

Milling Wheat

From the rich fields of Nebraska

Selected for millers who make good flour

BUTLER-WELSH GRAIN CO.

OMAHA, NEBR.

Storage, 2,500,000 Bu. Phone ATlantic 2900

Van Dusen Harrington Co.

• *Grain Merchants* •

BUSINESS FOUNDED 1852

MINNEAPOLIS DULUTH

GRIST OF GRINS

Darby: I had an awful time but I finally got a barometer.

Joan: What on earth do you want it for?

Darby: This barometer will tell me when it's going to rain.

Joan: Such extravagance! What do you suppose the good Lord gave you the rheumatism for?

◆ ◆ ◆

Jack: Boy, oh boy, am I happy; a bundle of joy arrived at our house last night!

Curt: Congratulations! What was it—a boy or a girl?

Jack: Neither. It was last month's laundry.

◆ ◆ ◆

Lawyer: Now, sir, did you, or did you not, on the date in question or at any time, say to the defendant or anyone else that the statement imputed to you and denied by the plaintiff was a matter of no moment or otherwise? Answer me, yes or no.

Bewildered witness: Yes or no, what?

◆ ◆ ◆

Every day is D-Day for civilians. Dig down for this and dig down for that.

◆ ◆ ◆

Social Note: Three society ladies were having tea at the Waldorf. The first said: "My husband bought me some diamond bracelets. Then my skin broke out, and the doctor said I was allergic to diamonds. So we had to return them." The second said that her husband bought her a fur coat, which had to be returned because the doctor said she was allergic to furs. The third fainted, was revived, and said: "I'm allergic to hot air."

◆ ◆ ◆

"It's tough to pay 40c lb for meat."

"Mmm. But it's tougher when you pay only 20c."

◆ ◆ ◆

She had looked at innumerable blankets and apparently none pleased her. Finally she said to the clerk: "I was just looking for a friend." "Well, madam," he replied, his patience exhausted, "if you think your friend is in one of those blankets on the top shelf, I'll be glad to look."

◆ ◆ ◆

The minister was sympathizing with the recently bereaved widow. "Your husband," he said, "was a man of many excellent qualities."

"Yes," sighed the widow, "he was a good man. Everybody says so. I wasn't much acquainted with him myself. You see, he belonged to seven lodges and three clubs."

◆ ◆ ◆

Wife: I suppose you want me to give my job up now that you are home again.

Veteran: How much do you make?

Wife: $50 a week.

Veteran: That's no job. It's a career. I wouldn't want to interfere with it, darling.

BETTER FLOURS FOR BETTER BAKING

A Complete Flour Service

★ Hard Spring Wheat
★ Hard Winter Wheat
★ 100% Whole Wheat
★ Cake Flours
★ Pastry Flours

RUSSELL-MILLER MILLING CO.
MINNEAPOLIS 1, MINN.
Millers of Occident, American Beauty And Other Bakery Flours

"OLD SQUIRE"

Always is good flour. Pays no attention to ups and downs and this and that.

Just always GOOD FLOUR

Moore-Lowry Flour Mills Co.
Board of Trade Bldg. Kansas City, Mo.

The Rodney Milling Co.
20,000 CWTS CAPACITY
KANSAS CITY, MISSOURI

"Heart of America" FLOUR

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Seaboard Allied Milling Corporation
1209 Statler Bldg.

ACME
BAKERS SHORT PATENT
FLOUR
Also **"GOLD DRIFT"**
These Brands Meet Every Shop Need
The ACME FLOUR MILLS CO.
Oklahoma City, Okla.

BLAIR'S Certified FLOUR FEEDS

BLAIR MILLING CO., Atchison, Kans.

Brand Trouble?

Maybe we can help you. For half a century The Northwestern Miller has maintained a list of flour trademarks used in the United States and Canada. The file is available for the use of readers of this journal. Ask us—we'll gladly thumb through the cards for you.

The Northwestern Miller
118 South Sixth St. Minneapolis, Minn.

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Established 1870
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81 Hope Street GLASGOW

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(Successor M. J. Vos)
HAARLEM, HOLLAND
(Established 1908)
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Samples and Offers Solicited
Bankers: Nederlandsche Handel Mij. N. V. Cable Address: "TARVO," Haarlem

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C. I. F. business much preferred.
Cable Address: "Glencairn," Glasgow

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Cable Address: "WAVERLEY"

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Cable Address: "DIPLOMA," Glasgow

McCONNELL & REID, LTD.
FLOUR IMPORTERS
19 Waterloo St. GLASGOW
Cable Address: "MARVEL," Glasgow

WATSON & PHILIP, LTD.
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41 Constitution St., LEITH
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42 Regent Quay, ABERDEEN
Cables: "PHILIP," Dundee

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OFFICES ALSO AT
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Serves The Growing Feed Industry

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WANT ADS
...in...
THE NORTHWESTERN MILLER

Low Grades and Millfeed
I. S. JOSEPH CO., INC.
Minneapolis, Minn.

S. R. STRISIK CO.
Flour Mill Agents
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Standard of the South plus Dependable Service

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NEW YORK BOSTON
PHILADELPHIA

TRIPLE XXX FINE GROUND
ALFALFA MEAL
Ideal for Poultry Mashes
THE DENVER ALFALFA MILLING & PRODUCTS CO. Merchants Exchange, Lamar, Colo. St. Louis, Mo.

HABEL, ARMBRUSTER & LARSEN CO.
All **FLOUR** Grades
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"The Flour People"
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Baltimore 2, Md.

Flour Specialists Quality and Price Flour
M. S. Brownold Company
Successors to D. G. Van Dusen & Co.
Produce Exchange NEW YORK

"CREMO"
Just the Cream of Hard Wheat
CROOKSTON MILLING CO.
CROOKSTON, MINN.

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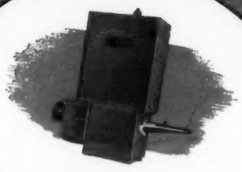

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In 1943, 1,363 Americans died of pellagra*, an easily preventable deficiency disease.

For more than 25 years it has been known that pellagra is caused by a deficient diet. Yet each year Americans die of it.

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Here at General Mills we are trying to help by developing materials which we hope will be usable in teaching good nutrition to school children.

These materials will be based on the latest authoritative information, will be perfected with the help of a committee of educators and will be thoroughly tested in the months to come with the cooperation of a number of rural, suburban and city schools.

Progress of this work will be reported to you on these pages. We invite your comments and suggestions.

General Mills, Inc.
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Enriched Flours • Restored Cereals • Vitamin Products

* *From Bureau of Census and U. S. Public Health Service Records.*

EVERY DAY'S DIET SHOULD INCLUDE THESE FOODS

GREEN AND YELLOW VEGETABLES . . . some raw, some cooked, frozen or canned. At least one serving a day.

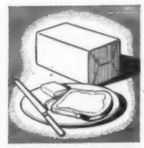
ORANGES, TOMATOES, GRAPEFRUIT . . . or raw cabbage or salad greens. At least one serving a day.

POTATOES AND OTHER VEGETABLE AND FRUITS . . . raw, dried, cooked, frozen or canned. Two or more servings a day.

MILK AND MILK PRODUCTS . . . fluid, evaporated or dried milk. One quart (or its equivalent) a day for children and expectant or nursing mothers; one pint a day for all others.

MEAT, POULTRY, FISH OR EGGS... or dried beans, peas, nuts or peanut butter. One serving of meat, poultry or fish a day, occasionally peas or beans instead. Three or four eggs each week.

BREAD, FLOUR, CEREALS . . . natural whole-grain or enriched or restored. Three or more servings a day.



BUTTER AND FORTIFIED MARGARINE . . . use for spreads and for seasoning as you like and as supplies permit.

In addition, all growing children and all expectant or nursing mothers should be provided with 400 units a day of Vitamin D in the form of Vitamin D milk (fresh or evap[illegible] liver oil or Vitamin D concentrate

One of a series of ads appearing in educational, medical and health magazines which reports on the General Mills nutrition program and helps to establish grain product foods in their proper place in the diet.